

Suwannee American Cement, LLC

Branford Cement Plant

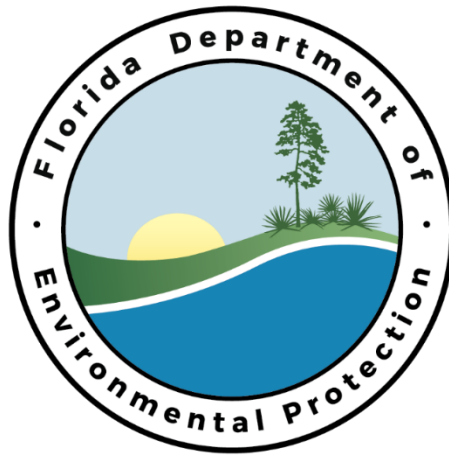
Facility ID No. 1210465

Suwannee County

Title V Air Operation Permit Revision

Permit No. 1210465-044-AV

(Revision to Title V Air Operation Permit No. 1210465-033-AV)



Permitting Authority:

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Title V Air Operation Permit Revision

Permit No. 1210465-044-AV

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Table H, Permit History.	



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Permit No. 1210465-044-AV
Branford Cement Plant
Facility ID No. 1210465
Title V Air Operation Permit Revision

The purpose of this permit is to revise the Title V air operation permit for the above referenced facility to incorporate Permit Nos. 1210465-039-AC, 1210465-040-AC, 1210465-045-AC, and the applicable provisions of Rule 62-204.800(9)(f), F.A.C., and 40 CFR 60, Subpart DDDD into the kiln section (EU004) of the permit. This existing facility is located at 5117 US Highway 27, Suwannee County; UTM Coordinates: Zone 17, 321.4 km East and 3315.9 km and, Latitude: 29° 57' 45" North and Longitude: 82° 51' 03" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named Permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Executed in Tallahassee, Florida.

1210465-033-AV Effective Date: January 19, 2016

1210465-044-AV Effective Date: October 19, 2017

Renewal Application Due Date: June 8, 2020

Expiration Date: January 19, 2021

For:

Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

SA/dlr/pks

SECTION I. FACILITY INFORMATION.

Subsection A. Facility Description.

This facility consists of a Portland cement manufacturing plant, associated limestone quarry, and raw material and cement handling operations. Limestone is mined, stockpiled and then mixed with other raw materials which provide an additional source of iron and aluminum, in designed proportions, to produce a ground mixture of kiln feed (or raw meal). The additional raw materials used may include but are not limited to coal ash, bauxite, sand, and mill scale. The plant combines raw materials and utilizes a preheater/calcliner kiln system with in-line raw mill (pyroprocessing system) to produce cement clinker. The clinker is milled and combined with gypsum and limestone to produce Portland cement.

The plant has a capacity of 210 tons per hour of dry preheater feed materials, 120 tons per hour of clinker production, and 150 tons per hour of Portland cement production. Annual production is limited to the following 12-month rolling totals: 1,684,578 tons per year of dry preheater feed materials, 965,425 tons per year of clinker production, and 1,191,360 tons per year of Portland cement production.

Fuels allowed to be used in the pyroprocessing system are natural gas, coal, petroleum coke, and alternative fuels. The plant includes a coal processing operation that crushes coal and petroleum coke and has a monthly processing capacity of 13,360 tons of coal and petroleum coke. The plant includes grinding and screening operations for Alternative Fuels (Re-processing).

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
001	Quarry Operations
002	Raw Materials Processing Operations- Raw material storage up to the preheater and includes recycling of captured PM.
003	Raw Material Processing – Unenclosed Conveyor Transfer Points
004	Pyroprocessing System: In Line Kiln/Raw Mill
005	Clinker Cooler
006	Clinker and Cement Processing Operations: Activities include cement being transferred to storage silos from the finish mill and transferred from a silo
007	Clinker and Cement Processing – Unenclosed Conveyor Transfer Points
008	Coal Mill and Coal Transfer System
009	Unenclosed Coal Conveying Equipment
011	Grinding and Screening Operations for Alternative Fuels (Re-processing)
<i>Unregulated Emissions Units and Activities</i> (see Appendix U, List of Unregulated Emissions Units and/or Activities)	

Also included in this permit are miscellaneous insignificant emissions units and/or activities (see Appendix I, List of Insignificant Emissions Units and/or Activities).

Subsection C. Applicable Regulations.

Based on the Title V Air Operation Permit Renewal application received September 2, 2014, this facility is a major source of hazardous air pollutants (HAPs). The existing facility is a PSD major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

SECTION I. FACILITY INFORMATION.

Regulation	EU No(s).
<i>Federal Rule Citations</i>	
40 CFR 63, Subpart A, NESHAP General Provisions	002, 003, 004*, 005, 006, 007
40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry	002, 003, 004*, 005, 006, 007
40 CFR 60, Subpart A, NSPS General Provisions	001, 002, 003, 004, 005, 006, 007, 008, 009
40 CFR 60, Subpart F, Standards of Performance for Portland Cement Plants.	002, 003, 004*, 005, 006, 007
40 CFR 60, Subpart Y -Standards of Performance for Coal Preparation Plants	008, 009
<i>State Rule Citations</i>	
Rule 62-4, Florida Administrative Code (F.A.C.) (Permitting Requirements)	001, 002, 003, 004*, 005, 006, 007, 008, 009
Rule 62-204, F.A.C. (Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference)	
Rule 62-204.800(9)(f), F.A.C.*	
Rule 62-210, F.A.C. (Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms)	
Rule 62-212.400, F.A.C., Prevention of Significant Deterioration	
Rule 62-213, F.A.C. (Title V Air Operation Permits for Major Sources of Air Pollution)	
Rule 62-296, F.A.C. (Emission Limiting Standards)	
Rule 62-297, F.A.C. (Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures)	

* At the time of issuance of this permit, the kiln (EU 004) is subject to Rule 62-204.800(9)(f), F.A.C., which incorporates the requirements of 40 CFR 60, Subpart DDDD, Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units (DDDD) and not 40 CFR 63, Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (LLL). If the permittee certifies that the kiln has not used any waste material for a period of six months and provides the appropriate advance notice to the Department, the permittee may revert back to compliance with LLL rather than DDDD, including performing all required initial compliance testing. If any material constituting waste were to be used, however, the kiln would immediately be subject to the DDDD requirements.

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SECTION II. FACILITY-WIDE CONDITIONS.

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The Permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

FW2. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An “objectionable odor” means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The Permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

{Permitting Note: Nothing is deemed necessary and ordered at this time.}

[Rule 62-296.320(1), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

1. Paving and maintenance of roads, parking areas and yards.
2. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
3. Application of asphalt, water, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
4. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
5. Landscaping or planting of vegetation.
6. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
7. Confining abrasive blasting where possible.
8. Enclosure or covering of conveyor systems.
9. All materials, coal and petroleum coke at the plant shall be stored under roof on compacted clay or concrete, or in enclosed vessels.
10. Water supply lines, hoses and sprinklers shall be located near all materials, coal and petroleum coke stockpiles. Mobile water vehicles may be used.
11. All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of materials, coal and petroleum coke regularly and before handling. If the visual inspections

SECTION II. FACILITY-WIDE CONDITIONS.

indicate a lack of surface moisture, the materials, coal and petroleum coke shall be wetted with sprinklers. Such wetting shall continue until the potential for unconfined particulate matter emissions are minimized.

12. Water spray bars shall be located at each unenclosed material and fuel conveyor, and the spray bars shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.
13. The manufacturing area and the access roadways for the facility shall be paved with asphalt or concrete.
14. The main access road leading to the plant and the road leading to the cement silos shall be cleaned with a mechanical broom sweeper on an as needed basis for particulate control on the roads within the facility.
15. The existing wheel wash will remain in place and available to be employed should conditions at the facility warrant additional reasonable precautions for the control of PM₁₀.
16. Each Unenclosed conveyor and material drop point from the mine to the plant shall be controlled as necessary with water and/or dust suppressants.

In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rule 62-296.320(4)(c)2., F.A.C.; Rule 62-213.440, F.A.C.; Permit Nos. 1210465-001-AC, PSD-FL-259; and 1210465-010-AC/PSD-FL-259E; and those proposed by applicant in TV permit renewal application received September 2, 2014]

Excess Emissions

FW6. Rule 62-210.700 (Excess Emissions), F.A.C., cannot vary any requirement of an NSPS or NESHAP provisions. Excess emissions resulting from malfunction of the emissions units of this permit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed one hour in any 24 hour period. The emission limits established pursuant to the State Implementation Plan, including those limits established as BACT, shall apply at all other times including startup and shutdown. The averages determined by the CEM and COM systems shall include all emissions including those measured during periods of startup, shutdown and malfunction. [Permit No. 1210465-001-AC/PSD-FL-259, Rules 62-210.700(1) and (5), F.A.C.]

FW7. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Permit No. 1210465-001-AC/PSD-FL-259, Rule 62-210.700(4), F.A.C.]

{Permitting Note: Malfunction is defined at Rule 62-210.200(175), F.A.C., to mean “any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.”}

Annual Reports and Fees

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW8. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection’s Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP’s Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those

SECTION II. FACILITY-WIDE CONDITIONS.

regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site:

<http://www.dep.state.fl.us/air/emission/tvfee.htm>.

[Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, 40 CFR 403.0872(11), Florida Statutes (2013)]

{Permitting Note: Resources to help the permittee complete the AOR are available on the electronic AOR (EAOR) website at: <http://www.dep.state.fl.us/air/emission/eaor>. If the permittee has questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

FW9. Annual Statement of Compliance. The Permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. [Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

FW10. Prevention of Accidental Releases (Section 112(r) of CAA). If and when the facility becomes subject to 112(r), the Permittee shall.

- a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent electronically through EPA's Central Data Exchange system at the following address: <https://cdx.epa.gov>. Information on electronically submitting risk management plans using the Central Data Exchange system is available at: <http://www.epa.gov/osweroe1/content/rmp/index.htm>. The RMP Reporting Center can be contacted at: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
- b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

FW11. Semi-Annual Monitoring Reports. The permittee shall monitor compliance with the terms and conditions of this permit and shall submit reports of any deviations from the requirements of these conditions at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports, including reference to the specific requirement and the duration of such deviation. All reports shall be accompanied by a certification by a responsible official, pursuant to subsection 62-213.420(4), F.A.C. (See also Conditions RR2. – RR4. of Appendix RR, Facility-wide Reporting Requirements, for additional reporting requirements related to deviations.) [Rule 62-213.440(1)(b)3.a., F.A.C.]

{Permitting Note: EPA has clarified that, pursuant to 40 CFR 70.6(a)(3), the word "monitoring" is used in a broad sense and means monitoring (i.e., paying attention to) the compliance of the source with all emissions limitations, standards, and work practices specified in the permit.}

SECTION II. FACILITY-WIDE CONDITIONS.

Additional Operational Requirements

FW12. Property Fencing. The owner or operator shall fence the entire property perimeter to conform to the boundaries used for modeling the fence line receptors shown in the applicant's submittal to the Department received by electronic mail November 11, 1999. Such fencing shall be sufficient to prevent access onto the facility property from the general public. Gates may be installed at entry and exit points as long as the owner or operator controls entry onto the facility from the general public at these points.

[Rule 62-212.400(5)(d), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

FW13. Experience of Facility Personnel. The owner shall staff the facility with trained and experienced managers, supervisors and operators. Trained supervisors and operators shall be on duty at the plant at all times. The plant manager shall have at least 10 years of cement industry experience and shall also have experience as a cement plant manager. The qualifications of the plant manager with regard to cement industry and cement plant management experience shall be on file with the Department. This information shall be provided to the Department for any future plant manager changes within 30 days after the change.

[Permit No. 1210465-001-AC/PSD-FL-259]

FW14. Continuous Monitor Data Retrieval System. The owner or operator, at its sole expense, shall:

- a. Insure all of the CEMS are operational, recording and continuously transmitting available data to the Department's Northeast District Office; and
- b. Having provided the Department's Northeast District Office with one personal computer equipped with a modem and software, and corresponding hardware at the owner's facility, to enable the Department at any time to connect to the CEM system and allow the Department access to data from the continuous monitors for SO₂, NO_x and VOC expressed in terms of the units of the emission limiting standards of this permit, data from the continuous opacity monitor systems, and data from the monitor for the temperature at the inlet to the in-line kiln/raw mill particulate matter control device. The computer and software provide the Department with a numerical and graphical display of these data in real time pursuant to the averaging requirements of this permit, and allow the Department to electronically store and retrieve such data, and print such data as the Department may select. The software also allows the Department to review the exception log for any previous period of time accessible through the CEMS data management system.

The owner or operator shall also continue, at its sole expense, to post the above data on a real-time basis, as averaged pursuant to the averaging times for each applicable pollutant specified in **Condition C.29**, to an Internet site accessible to the Department and public at any time via standard Internet browser software.

[Permit No. 1210465-001-AC/PSD-FL-259]

FW15. On-Specification Used Oil. The on-specification used oil shall not exceed the following allowable levels and specifications.

Constituent/property	Allowable level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 °F minimum
Total halogens	4,000 ppm maximum

NOTES:

SECTION II. FACILITY-WIDE CONDITIONS.

- 1 Applicable standards for the burning of used oil containing PCBs are imposed by 40 CFR 761.20(e).
- 2 The allowable levels do not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see 40 CFR 279.10(b)).
- 3 Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1). Such used oil is subject to 40 CFR 266 Subpart H when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

- a. *Records*: The quantity of used oil accepted and the date of acceptance.
- b. *Retention of Records*: All records shall be maintained for at least 3 years.

[Permit No. 1210465-023-AC; Rule 62-710, F.A.C. and 40 CFR 279 Subpart B]

FW16. Off-Specification Used Oil. The off-specification used oil shall meet the requirements of 40 CFR 279 Subpart G including the following.

- a. *Total Halogen Content*: The total halogen content shall be below 1,000 ppm.
- b. *Records*: The quantity of used oil accepted and the date of acceptance.
- c. *Retention of Records*: All records shall be maintained for at least 3 years.

[Permit No. 1210465-023-AC; Rule 62-710, F.A.C. and 40 CFR 279 Subpart G]

FW17. Used Oil Notification.

- a. *Identification numbers.* Used oil burners which have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.
- b. *Mechanics of notification.* A used oil burner who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:
 - (1) A completed EPA Form 8700-12 (To obtain EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or
 - (2) A letter requesting an EPA identification number. Call the RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:
 - (i). Burner company name;
 - (ii). Owner of the burner company;
 - (iii). Mailing address for the burner;
 - (iv). Name and telephone number for the burner point of contact;
 - (v). Type of used oil activity; and
 - (vi). Location of the burner facility.

[40 CFR 279.62]

FW18. Used Oil Storage. Used oil burners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil burners are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

- a. *Storage units.* Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.
- b. *Condition of units.* Containers and aboveground tanks used to store oil at burner facilities must be:
 - (1) In good condition (no severe rusting, apparent structural defects or deterioration); and
 - (2) Not leaking (no visible leaks).

SECTION II. FACILITY-WIDE CONDITIONS.

- c. *Secondary containment for containers.* Containers used to store used oil at burner facilities must be equipped with a secondary containment system.
 - (1) The secondary containment system must consist of, at a minimum:
 - (i). Dikes, berms or retaining walls; and
 - (ii). A floor. The floor must cover the entire area within the dike, berm, or retaining wall.
 - (2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.
- d. *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
 - (1) The secondary containment system must consist of, at a minimum:
 - (i). Dikes, berms or retaining walls; and
 - (ii). A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
 - (iii). An equivalent secondary containment system.
 - (2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.
- e. *Secondary containment for new aboveground tanks.* New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
 - (1) The secondary containment system must consist of, at a minimum:
 - (i). Dikes, berms or retaining walls; and
 - (ii). A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
 - (iii). An equivalent secondary containment system.
 - (2) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

[40 CFR 279.64]

FW19. Used Oil Notices.

- a. *Certification.* Before a burner accepts the first shipment of off-specification used oil fuel from a generator, transporter, or processor/re-refiner, the burner must provide to the generator, transporter, or processor/re-refiner a one-time written and signed notice certifying that:
 - (1) The burner has notified EPA stating the location and general description of his used oil management activities; and
 - (2) The burner will burn the used oil only in an industrial furnace or boiler identified in §279.61(a).
- b. *Certification retention.* The certification described in paragraph (a) of this section must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor/re-refiner.

[40 CFR 279.66]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

The specific conditions in this subsection apply to the following emissions unit:

EU No.	Description	Emissions Points	Description	Emissions Control
-001	Quarry Operations: An in-pit 1000 TPH primary crusher and associated unenclosed belt conveyors from the crusher to limestone storage areas.	02	Primary Crusher- Missouri Rogers Corp. Dynapactor, Model 4654	Material Moisture or Water Sprays (as needed)

Permitting Note: This emissions unit is regulated under Rule 212.400, F.A.C., Prevention of Significant Deterioration (PSD); Best Available Control Technology (BACT) Determination, dated June 1, 2000. The primary crusher (Missouri Rogers Corp. Dynapactor, Model 4654) was manufactured in 1962 (predating the Subpart OOO applicability date of August 31, 1983) and has not been modified or reconstructed. The primary crusher is therefore not subject to the requirements of 40 CFR 60, Subpart OOO.

Essential Potential to Emit (PTE) Parameters

A.1. Process Rate Limitation. The crushers shall not process more than 165,155 tons of raw materials in any month and an annual limit of 1,981,860 tons per year.

{Permitting Note: This process rate is based on estimated moisture content of raw material of 15% and includes the weight of this moisture. The applicant has estimated that the potential to emit from crushing, transfer and unloading operations is: PM_{6.1}, PM₁₀ 1.9, and PM_{2.5} 0.12 tons per year.}

[Rule 62-210.200 (PTE), F.A.C., Rule 62-4.160(2), F.A.C.; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-011-AC/PSD-FL-259F; and 1210465-029-AC]

A.2. Hours of Operation. This emissions unit is allowed to operate continuously, i.e., 8,760 hours/year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259; and 1210465-029-AC]

A.3. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

{Permitting Note: Unless otherwise specified, the averaging time(s) for Condition A.4. is based on the specified averaging time of the applicable test method.}

A.4. Particulate Matter Fugitive Emission-Crusher (EP02). Fugitive emissions from the primary crusher shall not equal or exceed 15 percent opacity. [Permit No. 1210465-001-AC/PSD-FL-259]

Test Methods and Procedures

A.5. Visible Emission Test Methods and Procedures (EP 02). In determining compliance with the particulate matter standard in **Condition A.4.**, the owner or operator shall use EPA Reference Method (RM) 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. [Permit No. 1210465-001-AC/PSD-FL-259]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection A. Emissions Unit 001

- A.6. Visible Emissions– Frequency of Testing (EP 02).** A visible emissions test shall be conducted during each calendar year (January 1st – December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C., Permit No. 1210465-001-AC/PSD-FL-259]
- A.7. Visible Emissions- Required Sampling Time (EP 02).** The required minimum period of observation for each visible emissions test shall be thirty (30) minutes except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.]
- A.8. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Reporting and Recordkeeping Requirements

- A.9. Records-EP 02.** The owner or operator shall make and maintain records showing the monthly processing rate of the crusher. Records of the processing rate for each month shall be made no later than 10 days following the end of the month. [Permit Nos. 1210465-001-AC/PSD-FL-259; and 1210465-029-AC]
- A.10. Reporting and Recordkeeping (EP 02).** The owner or operator shall submit written reports of the results of all opacity observations made using EPA Reference Method 9 (40 CFR 60, Appendix A-4) to demonstrate compliance with **Condition A.4.** [Permit No. 1210465-029-AC]
- A.11. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

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SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 002 and 003

The specific conditions in this subsection apply to the following emissions units:

EU No.	Description	Emissions Points	Description	Emissions Control
-002	Raw Materials Processing Operations: Raw material storage up to the preheater and includes recycling of captured PM.	E-28	Aeropol at the Blend Silo	Baghouse
		E-34	Off-Spec Kiln Feed Handling Bin <i>This baghouse services both the Off-Spec Kiln Feed Handling Bin as well as the Hydrated Lime Silo</i>	Baghouse
		G-07	Blend Silo Inlet	Baghouse
		H-08	Blend Silo Outlet	Baghouse
		U-05-01	Fly Ash silos U-01-01	Baghouse
-003	Raw Material Processing: Unenclosed Conveyor Transfer Points –Transports material from the covered raw material storage areas to the roller mill feed bins.	D05/D01 D01 C11 C13 C14	RMS Reclaimer transfer point D01/D02 transfer point Fly Ash Unloading Hopper Fly Ash Storage Building Fly Ash Tripper Car	Material Moisture or Water Sprays (as needed)

{Permitting Notes: These emissions units are regulated under NSPS- 40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants, 40 CFR 60, Subpart A – General Provisions, 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry, 40 CFR 63 Subpart A- General Provisions, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration, Best Available Control Technology (BACT) Determination, dated June 1, 2000.}

{The Air Heater is physically located in EU 002, but emissions vent to EU 004. By addressing the Air Heater in only subsection C rather than also in subsection B, the applicability of LLL and DDDD to the Air Heater will be correctly applied to the emissions units that vents the air heater.}

Essential Potential to Emit (PTE) Parameters

B.1. Hours of Operation. This emissions unit may operate continuously, i.e., 8,760 hours per year.

[Rule 62-210.200(PTE), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

B.2. Hydrated Lime Injection System. Hydrated Lime may be injected near the top of the preheater as an option to control SO₂ emissions. [Permit No. 1210465-008-AC (PSD-FL-259D)]

B.3. Fly Ash Injection. Fly ash may be injected into the calciner in addition to the introduction via the top of the preheater. [Permit No. 1210465-011-AC (PSD-FL-259F)]

{Permitting Note: The fly ash injection system was converted into the bag house dust shuttle system per Permit No 1210465-026-AC}

B.4. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Control Technology

B.5. Particulate Matter Emissions -EU002. Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. [Permit No. 1210465-001-AC, PSD-FL-259]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 002 and 003

B.6. O&M Plan for Baghouses – EU 002. The owner or operator shall prepare an operation and maintenance plan (O&M plan) to address operation and regular, routine inspection and maintenance of the baghouses for emissions units 002. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. [Permit No. 1210465-001-AC/PSD-FL-259]

Emission Limitations and Standards

{Permitting Note: Unless otherwise specified, the averaging time(s) for Specific Condition(s) B.8. are based on the specified averaging time of the applicable test method.}

B.7. Permitted Maximum Allowable Emission Rate (EU002 & 003). The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant	Emissions Units	Emissions Limitations	Regulation
Visible Emissions	002 All emission points	5% Opacity ¹	BACT
		10% Opacity	40 CFR 63.1345 ²
	003	10% Opacity	40 CFR 63.1345 ²
Particulate Matter	002 All emission points	0.01 gr/dscf	BACT ³
PM ₁₀		0.0085 gr/dscf	

¹ The BACT emission limits of this permit for Emissions Unit 002 are as stringent or are more stringent than the emission limits imposed by the otherwise applicable rules.

² NESHAP, Subpart LLL– Portland Cement Manufacturing Industry

³ These emissions limits from (EU002) effectively limit annual emissions of PM for all emission points in this emission unit to 7.1 tons per year. PM₁₀ emissions are estimated to equal 85% of PM emissions, or 6.0 tons per year. The particulate weight emission standards and the visible emissions limit of 5% opacity are BACT.

[Rules 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT and applicant request; 40 CFR 60.62(c) subsumed; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-004-AC/PSD-FL-259C; and 1210465-011-AC/PSD-FL-259F; 40 CFR 63.1345]

Monitoring of Operations

B.8. Operations and Maintenance Plan- EU 002, EU 003. The owner or operator shall prepare for each affected source subject to the provisions of 40 CFR 63 Subpart LLL, a written operations and maintenance plan. The plan must include the information required in 40 CFR 63.1347. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1347(a),(1),(2),(b)]

B.9. Monitoring Requirements – EU002, EU003.

- (1) The owner or operator must demonstrate compliance with 40 CFR 63 Subpart LLL on a continuous basis by meeting the requirements of 40 CFR 63.1350(f)(1) and (3).
- (2) N/A - neither emissions unit is equipped with a CMS.

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 002 and 003

- (3) Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section is a violation.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1),(4)]

- B.10. LLL Opacity Monitoring Requirements – EU002, EU003.** The owner or operator shall monitor opacity in accordance with the provisions of 40 CFR 63.1350(f)(1) and the monitoring plan developed in accordance with paragraph 40 CFR 63.1350(p). An opacity monitoring plan shall also be developed in accordance with 40 CFR 63.1350 (p)(1) through (4) and 40 CFR 63.1350(o)(5), if applicable.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(1)]

- B.11. LLL Opacity Corrective Actions– EU002, EU003.** If visible emissions are observed during any Method 22 visible emissions test conducted under 40 CFR 63.1350(f)(1) [**Condition B.11.**], the owner or operator must initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347 [**Condition B.9.**]. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(3)]

- B.12. LLL Development and submittal (upon request) of monitoring plans.** If compliance with any applicable emissions limit is demonstrated through performance stack testing or other emissions monitoring, a site-specific monitoring plan must be developed according to the requirements in paragraphs (1) through (4) of 40 CFR 63.1350(p). This requirement also applies if the owner or operator petitions the EPA Administrator for alternative monitoring parameters under 40 CFR 63.1350(o) and 40 CFR 63.8(f). If the permittee uses a BLDS, the permittee must also meet the requirements specified in paragraph (p)(5) of 40 CFR 63.1350. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(p)]

- B.13. LLL Continuous Monitoring Requirements.** Compliance must be demonstrated with the emissions standards and operating limits of 40 CFR 63 Subpart LLL by using the performance test methods and procedures in 40 CFR 63.1350 and 40 CFR 63.8 for each affected source. These emissions units shall comply with the requirements of 40 CFR 63.1348(b)(1),(3), and (9). [Rule 62-204.800, F.A.C.; and 40 CFR 63.1348(b)(1), (3), (9)]

- B.14. LLL Changes in operations.** If the owner or operator plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR 63 Subpart LLL, the source must conduct a performance test as specified in 40 CFR 63.1349(b). These emissions units shall also comply with the requirements of 40 CFR 63.1348(c)(2). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(c)]

- B.15. LLL General duty to minimize emissions.** Any affected source shall meet the requirements of 40 CFR 63.1348(d). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(d)]

Test Methods and Procedures

- B.16. Visible Emissions- Test Method- EU 002.** Testing for demonstration of compliance shall be performed in accordance with EPA Reference Method (RM) 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard. [Rules 62-297.310, 62-297.620(4), 62-204.800, F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259]

- B.17. Visible Emissions- Test Duration- EU 002.** The required minimum period of observation for a visible emissions test shall be 30 minutes, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 002 and 003

- B.18. Visible Emissions- Test Frequency-EU 002.** A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]
- {Permitting Note: Pursuant to 40 CFR 63 Subpart LLL, 40 CFR 63.1349(c), a visible emissions test is not required except as required by 40 CFR 63.1348(b). [Rule 62-204.800, F.A.C., 40 CFR 63.1349(c)]}*
- B.19. Particulate Matter- Test Method- EU 002.** If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A-3. [Permit No. 1210465-001-AC/PSD-FL-259]
- B.20. Particulate Matter- Test Frequency- EU 002.** Annual compliance testing for particulate matter emissions from this emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. [Rule 62-297.620(4), F.A.C. and Permit No. 1210465-001-AC, PSD-FL-259]
- B.21. PM₁₀- Test Method- EU 002.** Testing for demonstration of compliance shall be performed using EPA Method 201 of 40 CFR 51, Appendix M (amended 9/13/2010 or later version) for PM₁₀ emissions. [Rules 62-297.310, 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]
- B.23. PM₁₀- Test Frequency- EU 002.** Particulate matter₁₀ emissions testing for EU002 is not required if the particulate matter test(s) demonstrate compliance with the PM limits. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]
- B.24. Visible Emissions- Test Method- EU 003.** Testing for demonstration of compliance shall be performed in accordance with EPA Reference Method (RM) 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard. [Rules 62-297.310, 62-297.620(4), and 62-204.800, F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259]
- B.25. Visible Emissions- Test Duration- EU 003.** The required minimum period of observation for a visible emissions test shall be 30 minutes, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.]
- B.26. Visible Emissions- Test Frequency-EU 003.** A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 63.1349(c)]
- {Permitting Note: Pursuant to 40 CFR 63 Subpart LLL, 40 CFR 63.1349(c), a visible emissions test is not required except as required by 40 CFR 63.1348(b). [Rule 62-204.800, F.A.C., 40 CFR 63.1349(c)]}*
- B.27. Compliance with NESHAP Subpart LLL- EUs 002, 003.** Performance test results shall be documented in complete test reports that contain the information required by 40 CFR 63.1349(a). [Rule 62-204.800, F.A.C.; 40 CFR 63.1349(a)]
- B.28. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Notification, Reporting and Recordkeeping Requirements

- B.29. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection B. Emissions Units 002 and 003

- B.30. LLL Notification Requirements.** The owner or operator shall comply with the notification requirements of 40 CFR 63.1353(a),(b)(1),(2),(3),(5), and (6). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1353(a) and (b)(1), (2), (3), (5), (6)]
- B.31. LLL Reporting Requirements.** The owner or operator shall comply with the reporting requirements of 40 CFR 63.1354(a),(b),(c). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a) and (b), (c)]
- B.32. LLL Recordkeeping Requirements.** The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 contained in Appendix NEHSAP 40 CFR 63 Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall also comply with 40 CFR 63.1355(b),(g), and (h). [Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a), (b), (g), (h)]
- B.33. Records of Startup, Shutdown and Malfunction.** The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Permit No. 1210465-001-AC/PSD-FL-259]

Other Applicable Requirements

- B.34. Federal Rule Requirements- EU 002, EU 003.** In addition to the Conditions listed above, this emissions unit is also subject to the applicable requirements contained in the attached permit appendices:

- 40 CFR 63, Subpart A – General Provisions (as stated in Table 1 to Subpart LLL of Part 63):
- 40 CFR 63 Subpart LLL- Portland Cement Manufacturing Industry
- 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants

{Permitting Note: The requirements of Subpart LLL are provided for clarity and convenience in this subsection. However, if all the applicable requirements from the subpart are not contained in this subsection, the Permittee is still subject to the omitted requirements.}

[Rule 62-213.440, F.A.C.; 40 CFR 63.1340(a),(b)(6),(7); 40 CFR 63.1342]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit 004

The specific conditions in this subsection apply to the following emissions units:

EU No.	Description	Emissions Points	Description	Emissions Control
-004	Pyroprocessing System - In Line Kiln/Raw mill: Waste heat from the kiln is used to provide heat to the raw mill and kiln preheater, which is used to drive off moisture from the materials used for making clinker.	E-21	Main Stack	Baghouse MSC SNCR HLI GCT DSS

{Permitting notes: Particulate Matter emissions from the preheater/precalciner kiln are controlled by a baghouse. MSC- Multistage Combustion for the control of NO_x emissions, SNCR – Selective Non-Catalytic Reduction system for NO_x emissions control and reduction, HLI- Hydrated Lime Injection system to control and reduce SO₂ emissions, GCT- Gas Conditioning Tower to control the baghouse inlet temperature for baghouse protection and dioxin/furan emissions control or reduction, DSS- Dust Shuttle System for reduction and control of Mercury emissions.}

{Permitting Note: Continuous emission monitoring systems (CEMS) in the main kiln/raw mill stack measure and record emissions of NO_x, SO₂, total hydrocarbons or “THC” (which serves as a surrogate for VOC emissions), and CO₂. Particulate Matter is continuously monitored through use of a PM continuous parametric monitoring system (PM CPMS) in the main kiln/raw mill in accordance with the requirements of NESHAP subpart LLL. Permittee shall continuously monitor for other pollutants as required by DDDD or LLL, as applicable.}

*{Permitting notes: Emissions unit 004 is regulated under NSPS- 40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants, 40 CFR 60, Subpart A – General Provisions, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration, Best Available Control Technology (BACT) Determination, dated June 1, 2000. The permittee notified the Department by letter dated September 2, 2016, that the Branford Cement Plant kiln is subject to the requirements for existing waste burning kilns under Rule 62-204.800(9)(f), F.A.C., which incorporates the requirements of DDDD, rather than the requirements of LLL. At the time of issuance of this permit, the kiln remains subject to DDDD and not LLL. If the permittee certifies that the kiln has not used any waste material for a period of six months and provides the appropriate advance notice to the Department, the permittee may revert back to compliance with LLL rather than DDDD. If any material constituting waste were to be used, however, the kiln would immediately be subject to the DDDD requirements. This subsection of the permit (EU 004) therefore includes separate sets of conditions to address the respective requirements. **Conditions C.29 through C.50** apply only when the permittee is subject to DDDD. **Conditions C.51 through C.86** apply only when the permittee is subject to LLL. **Conditions C.4. through C. 28.** apply regardless of applicability of DDDD or LLL. Rule. 62-204.800(9)(f), F.A.C. references 40 CFR 60, Subpart DDDD; therefore 40 CFR 60, Subpart DDDD is included in the appendix section of this permit.}*

C.1. NESHAP Applicability.

- Subpart LLL. Subpart LLL and **Conditions C.51 through C.86** apply to this emissions unit (EU) if the permittee were to switch to all non-waste fuels and meet the requirements of **Condition C.3** below, then Subpart LLL would apply instead of the CISWI requirements. [40 CFR 63.1348(a)]
- Subpart A. If this EU becomes subject to NESHAP Subpart LLL, 40 CFR 63 Subpart A –General Provisions, would also apply. [40 CFR 63.1]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit 004

C.2. NSPS Applicability.

- a. Subpart A. This emissions unit shall comply with all the applicable standards contained in 40 CFR 60 Subpart A – General Provisions, regardless of the EU being subject to DDDD or LLL. [40 CFR 60.1]
- b. Subpart F. This emissions unit shall comply with all the applicable standards contained in 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants, regardless of the EU being subject to DDDD or LLL. [40 CFR 60.60]
- c. Subpart DDDD. This EU shall comply with all applicable standards under Rule 62-204.800(9)(f), F.A.C., which implements the emission guidelines of 40 CFR 60 Subpart DDDD - Emission Guidelines for Commercial and Industrial Solid Waste Incineration Units that Commenced Construction On or Before November 30, 1999, unless the operator switches to non-waste fuels as provided under **Condition C.3** below. [Rule 62-204.800(9)(f), F.A.C.]

{Permitting Note: The compliance date for this subpart is February 7, 2018. Rule 62-204.800(9)(f), F.A.C. and NSPS Subpart DDDD are included in the appendices document.}

C.3. Change of NSPS/NESHAP Applicability Status.

- a. Waste-to-Fuel Switch. If the permittee combusts solid waste in the kiln, the kiln is subject to NSPS Subpart DDDD. If the permittee ceases to combust solid waste in the kiln, the permittee has the option of switching from compliance with Subpart DDDD to compliance with NESHAP Subpart LLL. If the permittee makes this election, the permittee shall meet the following conditions.
 - (1) The permittee shall first establish an “effective date” for the waste-to-fuel switch, which shall be at least six (6) months after the date that the permittee ceased combusting solid waste in the kiln, consistent with 40 CFR 60.2710(a)(2), referenced in Rule 62-204.800(9)(f), F.A.C.
 - (2) The kiln shall remain in compliance with DDDD, set forth in **Conditions C.29 through C.50**, until the “effective date” of the waste-to-fuel switch.
 - (3) The permittee shall provide the Department with 30 days’ advance notice prior to the “effective date” of the waste-to-fuel switch.
 - (4) The permittee shall be in compliance with NESHAP Subpart LLL on the “effective date” of the waste-to-fuel switch.
- b. Notification of Waste-to-Fuel Switch. The permittee’s 30-day advance notification to the Department regarding the effective date of a waste-to-fuel-switch required **Specific Condition C.3a(3)** above, shall include:
 - (1) The date of the notice;
 - (2) The name of the owner or operator and the location of the DDDD kiln that will cease burning solid waste;
 - (3) The kiln is currently a DDDD unit, and Subpart LLL will become applicable as of the effective date of the waste-to-fuel switch;
 - (4) The fuel(s), non-waste material(s), and solid waste(s) the kiln is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the kiln will commence combusting;
 - (5) The date on which the kiln became subject to the currently applicable Subpart DDDD emission limits;
 - (6) The date the permittee ceased combusting solid waste in the kiln; and
 - (7) The effective date of the waste-to-fuel switch, consistent with **Specific Condition C.3a(1)** above.
- c. If the permittee meets these conditions, the kiln will become subject to the applicable requirements of NESHAP Subpart LLL on the effective date of the waste-to-fuel switch and **Conditions C.51 through C.86**, reflecting the Subpart LLL requirements will apply to the kiln, instead of the Subpart DDDD requirements reflected in **Specific Conditions C.29 through C.50**.
- d. Re-firing Solid Waste – Compliance Requirements. Following a waste-to-fuel switch and the applicability of LLL, if the permittee begins using materials identified as a solid waste in the kiln, the kiln

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection C. Emissions Unit 004

will again be subject to the DDDD requirements in Rule 62-204.800(9)(f), F.A.C. The “effective date” of the fuel-to-waste switch is the first day that the permittee introduces (or re-introduces) solid waste into the kiln. The permittee shall complete all initial compliance demonstrations for any LLL standards that are applicable to the kiln before the permittee commences or recommences combustion of solid waste. In addition, the permittee must provide 30 days’ prior notice of the fuel-to-waste switch “effective date.” After the completion of any required testing and the thirty-day notice, Subpart LLL requirements will no longer apply.

- e. All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel or fuel-to-waste switch.
- f. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks shall be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy testing for DDDD CEMS need not be repeated if that testing was previously performed consistent with section 112 monitoring requirements or monitoring requirements.

[Rule 62-204.800(9)(f), F.A.C. and 40 CFR 60.2710(a)]

{Permitting Note: Non-waste fuels, solid waste, and waste in Specific Conditions C.1 to C.3 are exclusively identified in 40 CFR 241. [Link to 40 CFR 241.](#)}

Specific Conditions C.4 – C.28 apply to this EU at all times, regardless of whether the EU is regulated under DDDD or LLL.

Essential Potential to Emit (PTE) Parameters

C.4. Hours of Operation. This emissions unit may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200(PTE) F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

C.5. Fuels and Heat Input. The pyroprocessing system (kiln and calciner) has a total maximum heat input design capacity of 458 million Btu per hour (mmBtu/hr). Fuels fired in the pyroprocessing system shall consist **only** of natural gas, coal, petroleum coke, and the Alternative Fuels as stated in Subsection F of this permit.

[Rules 62-210.200(PTE), F.A.C., Definitions and Permit Nos. 1210465-001-AC, PSD-FL-259; 1210465-011-AC/PSD-FL-259F; 1210465-023-AC; 1210465-024-AC; and 1210465-045-AC]

{Permitting Note: Coal, natural gas, and petroleum coke are not subject to the requirements stated in Subsection F of this permit. The heat input design capacity does not change with use of alternate fuels meeting the solid waste fuels under DDDD or LLL legitimacy criteria.}

Raw Mill Air Heater

C.6. Air Heater. Emissions from the air heater are included in the emission limitations of Emissions Unit 004. Estimated maximum potential emissions from the air heater alone are: NO_x, 3.12 lb/hr, CO 2.62 lb/hr, SO₂, 0.02 lb/hr, and VOC 0.08 lb/hr. [Permit No. 1210465-001-AC, PSD-FL-259]

Control Technology

C.7. Particulate Matter Emissions. Particulate matter emissions from this emissions unit shall be controlled by a baghouse. [Permit No. 1210465-001-AC, PSD-FL-259]

C.8. O&M Plan for Baghouses. The owner or operator shall prepare an operation and maintenance plan (O&M plan) to address operation and regular, routine inspection and maintenance of the baghouses for emissions units 004. The O&M plan shall address the schedule for inspection of this equipment and required

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preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. [Permit No. 1210465-001-AC/PSD-FL-259]

{Permitting Note: This O&M Plan requirement is based on a BACT determination (not LLL). However, the O&M Plan meets the requirements of LLL.}

C.9. Mercury (Hg) Emissions. The owner or operator may operate a dust shuttle system (DSS) to control Hg emissions by removing kiln feed from the main baghouse (E28) and shuttling (or transferring) the dust from the main baghouse for reintroduction as a cement product additive at the Finish Mill. [Permit No. 1210465-026-AC]

C.10. Sulfur Dioxide (SO₂) Emissions. The owner or operator may operate a hydrated lime injection system (HLI) to control SO₂ emissions by injecting hydrated lime with the kiln feed introduced at the top of the preheater tower. [Permit No. 1210465-008-AC/PSD-FL-259D]

C.11. Combustion and Process Control Technology. The owner or operator shall operate multistage combustion, with a separate line combustion chamber at the precalciner, for control of NO_x emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO₂ through design and control of the clinker production process.

The owner or operator may operate a selective non-catalytic reduction (SNCR) system, including a tank, pumps, piping, and metering equipment to inject ammonia solutions (including ammonia <19 percent strength, urea, etc.) between the lowest cyclone and the calciner to control NO_x emissions.

{Permitting Note: The ammonia injection rate is equivalent to an NH₃/NO_x molar ratio of 1.0 presuming baseline uncontrolled NO_x emissions of 4 lb/ton of clinker. The amount of ammonia injected is approximately 450 liters per hour (1-hour block for a solution containing 19% ammonia.)}

[Rule 62-212.400, F.A.C., and BACT; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-011-AC/PSD-FL-259F & 1210465-040-AC/PSD-FL-259L]

Emission Limitations and Standards

*{Permitting Note: Unless otherwise specified, the averaging time(s) for **Condition C.29.** are based on the specified averaging time of the applicable method of compliance.}*

C.12. Process Rate Limitations. The kiln shall not process more than 210 tons of dry preheater feed and dry flyash fed directly to the calciner and shall not produce more than 120 tons of clinker per hour on a 24-hour rolling average. Process and production rates shall be further limited to 1,684,578 tons of dry preheater feed and fly ash in any consecutive 12-month period and, 965,425 tons of clinker in any consecutive 12-month period.

The clinker production rate identified in the above paragraph shall be determined by the following equation:
Clinker Production= [(Feed) (kiln Feed LOI Factor) + (Fly Ash Injection) (Fly Ash LOI Factor)]

Where:

- Kiln feed is determined by the Poldos control system.
- Fly Ash is determined from the rotary feed system or equivalent.
- LOI for the kiln feed and fly ash is based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker.

[Rule 62-210.200(PTE), F.A.C., Definitions; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-011-AC/PSD-FL-259F & 1210465-040-AC/PSD-FL-259L]

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C.13. Maximum Rated Heat Input Capacity Air Heater. The air heater associated with the raw mill shall be fired only with natural gas, with a maximum rated heat input capacity of 32 mmBtu/hr. [Permit No. 1210465-001-AC/PSD-FL-259]

C.14. Mercury into the Pyroprocessing System Limited. The total mass of mercury compounds introduced into the pyroprocessing system, expressed as Hg, in raw mill feed and fuels shall not exceed 97 pounds per consecutive 12-month period. [Permit No. 1210465-001-AC/PSD-FL-259]

{Permitting Note: Compliance with either the DDDD or LLL Hg emissions standard stated in Specific Condition C.29 or Specific Condition C.51 shall satisfy compliance with this limit.}

Monitoring of Operations

C.15. Continuous Emissions Monitoring Systems – NO_x, SO₂, VOC. The owner or operator shall calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NO_x, and SO₂, from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit.

The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour as required per relevant emission limit.

a. **Compliance Demonstration:**

- (1) **SO₂- Short-Term.** Compliance with the emission limit for SO₂ shall be based on a rolling 24-hour average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 valid hourly averages.
- (2) **VOC.** Compliance with the emission limits for VOC shall be demonstrated by the monitoring of THC as a surrogate.
- (3) **NO_x.** Compliance with the emission limits for NO_x shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. An operating day is any day that the kiln produces clinker and/or fires fuel.

b. **Valid Hourly Averages.** Each hourly average shall be computed as the arithmetic average of the data points generated by the CEM system. Data points must be generated at least once per minute. For an hourly average to be considered valid, at least two data points separated by a period of 15 minutes or more must be used to compute the hourly average.

- (1) Hours during which there is no preheater feed and no fuel fired to the kiln systems are not valid.
- (2) Hours during which the plant is firing fuel but producing no clinker are valid, but these hours are excluded from the production-normalized emission rate computation (pounds per ton of dry preheater feed or pounds per ton of clinker). These hours are included in any pollutant mass emission rate computation (pounds per hour).

c. **Data Availability.** During each semiannual (six-month) period, CEM system valid hourly averages shall be obtained for at least 90 percent of the operating hours for which the plant is producing clinker. If the CEM system does not obtain valid hourly averages for 90 percent or more of the operating hours per semiannual period for which the plant is producing clinker, the Permittee shall submit a semiannual excess emissions and continuous monitoring system performance report. This report must include corrective actions, and it shall be submitted within 30 days following the end of each semiannual reporting period.

d. **Compliance Assurance.** CEM system breakdowns, malfunctions, repairs, calibration checks, zero adjustments, and span adjustments all result in periods during which CEM system data are not obtained. During such periods in excess of 120 hours per calendar quarter, the Permittee shall assure compliance with the emissions standards of this permit through stack tests, alternative monitoring systems, or other methods as approved by the Department.

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- e. **THC Monitor.** A THC monitor shall be used to demonstrate compliance with the THC (measured as propane) limit and the VOC BACT limit. If methane is measured concurrently with THC, then “THC as propane, minus methane” can be considered to be VOC (“VOC as propane”) for purposes of compliance. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown.
- (1) The THC CEMS shall be operated and maintained in accordance with Performance Specification 8A of appendix B to 40 CFR 60. The system shall comply with all of the requirements for continuous monitoring systems found in the general provisions of Subpart A in 40 CFR 63.
- (2) The THC CEMS must be operated and maintained according to the quality assurance requirements in Procedure 1 of Appendix F in 40 CFR 60. For THC CEMS certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in Appendix A to 40 CFR 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2.

{Permitting Note: LLL related THC monitoring requirement do not apply if the kiln is subject to NSPS Subpart DDDD.}

[Permit No. PSD-FL-259K and L]

- f. **Monitor Type and Span.** The span values for the NO_x, SO₂, and VOC (or THC) CEM systems shall be no less than 150 percent and no greater than 300 percent of the maximum permitted emissions of the inline kiln/raw mill. For purposes of setting CEM system span values, the mass emission rate (pounds per hour) for SO₂, NO_x, and VOC (or THC) shall be converted to an approximate stack gas concentration (ppm) based on the minimum expected stack gas flow rate (cubic feet per minute) and the permitted mass emission rate limit (pounds per hour). All CEM systems shall be capable of automatically switching to a higher span to accurately measure spikes of stack gas concentrations. The span value for the oxygen CEM system shall be 25 percent oxygen.
- g. **Calculation Algorithm.** Rolling and block averages shall be calculated through the integrated and automated data acquisition and handling system of the CEM system or through some other method as approved by the Department. The calculation algorithm shall be documented and available on-site for inspection and verification.

[BACT; and Permit Nos. 1210465-039-AC (PSD-FL-259K) and 1210465-040-AC (PSD-FL-259L)]

C.16. CO Process Monitors. The owner or operator shall maintain one or more process monitors for carbon monoxide that will continuously monitor carbon monoxide content in the process gases to enable the operator to properly operate the pyroprocessing system while minimizing emissions of CO, VOC and NO_x. The data from the process monitors shall be available at the facility for Department inspection. The owner or operator shall, upon request of the Department during inspection, provide the Department with sufficient process information to allow the Department to estimate emissions of CO from the process monitor data, in units of pounds of CO per ton of clinker and pounds per hour. [Permit No. 1210465-001-AC/PSD-FL-259]

C.17. Good Combustion Practices. The permittee shall implement good combustion practices to minimize the formation of VOC. Good combustion practice requires the following elements:

- a. Proper mixing; and
- b. High temperature.

[Rule 62-212-.400(BACT), F.A.C.; and Permit No. 1210465-039-AC/PSD-FL-432]

Test Methods and Procedures

C.18. Annual Performance Testing. In addition to the continuous monitoring requirements of this permit, the owner or operator shall demonstrate compliance with the PM, PM₁₀, CO, and VE emission limits of this

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permit (refer to **Condition C.29.**) for Emissions Unit 004 annually⁴ using the test methods of 40 CFR 60 Appendix A and 40 CFR 61 Appendix B (2009 or later versions) specified below. The tests conducted annually for the relative accuracy test audit (RATA) for the SO₂, NO_x, and THC CEM systems may be used to satisfy this requirement provided the owner or operator satisfies the prior notification requirements and emission testing requirements of this permit for performance and compliance tests.

POLLUTANT	TEST METHOD
PM	Method 5 ¹
PM ₁₀	Method 5, assuming all PM measured is PM ₁₀
SO ₂	Method 6 or 6C
NO _x	Method 7 or 7E ²
VE	Method 9
CO	Method 10 ³
THC	PS 8 or 8A
VOC	Method 18 and 25A

¹ The minimum sample volume shall be 30 dry standard cubic feet.

² NO_x emissions testing shall be conducted with the air heater in operation at the highest heat input possible during the test.

³ At least one of the first two required stack tests for CO conducted after first use of bottom ash shall be conducted while using bottom ash unless the facility ceases usage of bottom ash.

⁴ During each calendar year (January 1 to December 31st).

Each test shall be conducted while all continuous monitoring systems are functioning properly, and with all process units operating at their permitted capacity.

[Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-026-AC; 1210465-037-AC/PSD-FL-259J and 1210465-039-AC/PSD-FL259K&432; Rules 62-297.310(8)(a), 62-297.310(8)(a)5.b., and 62-204.800(11)(b)48, F.A.C.;

*{Permitting Note: Also see **Condition TR7.b.(3)(a).** of Appendix TR.}*

C.19. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Compliance Monitoring

C.20. Cement Kiln Dust. Cement kiln dust shall be recirculated in the process and shall not be directly discharged from process or emission control equipment. Cement kiln dust removed from process equipment during maintenance and repair shall be confined and controlled at all times and shall be managed in accordance with the applicable provisions of 40 CFR 261. *{Permitting Note: 40 CFR 261 has been omitted for brevity. See the Code of Federal Regulations for the text}.* [Permit No. 1210465-001-AC/PSD-FL-259]

Notification, Reporting and Recordkeeping Requirements

C.21. Records of Process and Production Rates. The owner or operator shall make and maintain records of the process rate of dry preheater feed in units of tons per hour and tons per consecutive 12-month period, and the production rate of clinker and cement in units of tons per hour and tons per consecutive 12-month period. The owner or operator shall make and maintain records of the production of portland cement in units of tons per consecutive 12-month period. Records in units of tons per hour shall be based on either hourly averages or daily averages and shall be completed no later than the day following the day of the record. Records in units of tons per consecutive 12-month period shall be made from monthly records of process and production rates for the past 12 months, and shall be completed no later than the 10th day of each month. [BACT; Permit Nos. 1210465-001-AC/PSD-FL-259; and 1210465-010-AC/PSD-FL-259E]

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C.22. Records of Fuels and Heat Input. The owner or operator shall record the fuel-firing rate continuously. The owner or operator shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the sulfur content, heat content and, for coal and petroleum coke, the proximate and ultimate analyses.

The owner or operator shall make and maintain records of heat input to the pyroprocessing system on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel-firing rate by the heating value representative of that fuel from the records of fuel analysis. Such records shall be completed for each block-hour, within 15 minutes of the end of each block-hour.

[Permit No. 1210465-001-AC/PSD-FL-259]

C.23. Material Balance Records of Mercury. The owner or operator shall demonstrate compliance with the mercury throughput limitation of 97 pounds per consecutive 12-month period by material balance and making and maintaining records of monthly and rolling 12-month mercury throughput. The owner or operator shall, for each month of sampling required by this condition, perform daily sampling of the raw mill feed, any baghouse dust transferred to the finish mill, coal, petroleum coke, alternative fuels, tires and tire derived fuel, and shall composite the daily samples each month, and shall analyze the monthly composite sample to determine mercury content of these materials for the month. The owner or operator shall determine the net mass of mercury introduced into the pyroprocessing system (in units of pounds per month) from the total of the product of the mercury content from the monthly composite analysis and the mass of each material or fuel used during the month.

The consecutive 12-month record shall be determined from the individual monthly records for the current month and the preceding eleven months and shall be expressed in units of pounds of mercury per consecutive 12-month period. Such records shall be completed no later than 25 days following the month of the records. To determine the mercury content of the feed material and fuels to be used in the monthly calculation, sampling and analysis shall be performed in accordance with the following schedule:

For each year, sample for one month of each year and analyze that month's composite sample, except as follows.

- a. If there is a change in feed material or fuels utilized from those previously sampled and analyzed, the frequency shall be sampling for one month of each quarter and analysis of that month's composite sample, for the next three quarters.
- b. If the monthly composite analysis shows a total net monthly mercury throughput of greater than 6.2 pounds per month of mercury introduced into the pyroprocessing system, the frequency shall be sampling for one month of each quarter and analysis of that month's composite sample, above, for the next three quarters or until the net monthly throughput is less than or equal to 6.2 pounds per month, whichever is longer.

*{Permitting Note: Permit No. PSD-FL-259D changed a mercury sampling location identified as the "preheater feed material from the blend silo" to the "raw mill feed". This is the correct monitoring point as stated in Final Order OGC Case No. 99-116, DOAH Case No. 99-3096 and the sampling locations are now consistent with those identified in **Condition C.14.**}*

{Permitting Note: The total mass of mercury compounds material balance compliance methods that were included in the original facility construction permit No. 1210465-001-AC (PSD-FL-259) and subsequent revisions are applicable until the compliance date of DDDD or LLL.}

[Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-008-AC/PSD-FL-259D, 1210465-026-AC]

C.24. Recordkeeping- Natural Gas. The Permittee shall keep records on-site of the total quantity of natural gas burned in the kiln and calciner. [Permit No. 1210465-024-AC; Rule 62-4.030, *General Prohibition*, F.A.C.; and, Rule 62-4.210, *Construction Permits*, F.A.C.]

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- C.25. Records Availability.** All records shall be made available to the Department upon request. [Permit No. 1210465-024-AC; Rule 62-4.030, *General Prohibition*, F.A.C.; and, Rule 62-4.210, *Construction Permits*, F.A.C.]
- C.26. Records of Startup, Shutdown and Malfunction.** The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Permit No. 1210465-001-AC/PSD-FL-259]
- C.27. Other Reporting Requirements.** See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]
- C.28. 5-Year Emissions Monitoring - PSD Avoidance Requirements.**
- a. **Monitoring.** The Permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. The change (proposed project) shall not increase the design capacity of any emissions unit or its potential to emit that PSD pollutant. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.
 - (1) The Department identified the following PSD pollutants that could increase from the project authorized by Permit No. 1210465-024-AC: **NO_x** and **VOC** (surrogate for THC & indicator of CO).
 - (2) The Permittee shall use the same calculation methodology for emissions before and after the completed project under Permit No. 1210465-024-AC. In summary, the CEMS shall be used for emissions of NO_x and VOC (surrogate for THC & indicator of CO).
[Rule 62-212.300(1)(e)1., F.A.C.; and, Permit No. 1210465-024-AC]
 - b. **Reporting.** The Permittee shall report to the Department by March 1st based on the records required to be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:
 - (1) The name, address and telephone number of the owner or operator of the major stationary source;
 - (2) The specific dates for commencement of the project and completion of the project;
 - (3) The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.;
 - (3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference;
 - (4) Any other information that the owner or operator wishes to include in the report;
 - (5) The baseline actual emissions to which the annual emissions were compared to; and,
 - (6) For the Department identified PSD pollutants: a statement indicating whether or not the applicable PSD significant emission rates (SERs) defined in Rule 62-210.200, F.A.C., were exceeded, specifically, 40 TPY for NO_x and 40 TPY for VOC. If and when a PSD SER is exceeded, the Permittee shall submit a PSD permit application with a BACT analysis or if the Permittee determines that a PSD permit application with a BACT analysis is not required, the Permittee shall provide specific citations as to why the project is exempt from a PSD permit application with a BACT analysis.
[Rule 62-212.300(1)(e)2., F.A.C.; and Rule 62-4.070(1)&(3), *Reasonable Assurance*, F.A.C.; Rule 62-4.030, *General Prohibition*, F.A.C.; and, Rule 62-4.210, *Construction Permits*, F.A.C.; Permit No. 1210465-024-AC]

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- c. Recordkeeping. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1. and 2., F.A.C., shall be submitted to the Department, which shall make it available for review to the general public. [Rule 62-212.300(1)(e)3., F.A.C.; Permit No. 1210465-024-AC]
- d. Source Obligation. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(c), F.A.C.; Permit No. 1210465-024-AC]

Conditions C.29 to C.50 apply only if the kiln unit is subject to DDDD.

Emission Standards and Operating Limits

C.29. Permitted Maximum Allowable Emission rate when the Kiln is Subject to DDDD. The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant ¹	Units ²							Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	mg/dscm	ng/dscm TEQ	ppmv d		
PM	0.11	23.1	---	---	---	---	---	Calendar yr, Raw Mill up, ST (3 hr)	BACT ^{7,11}
	---	---	---	---	13.5 @ 7% O ₂	---	---	Annual or Greater Method 5, 3-hr/PM-CPMS, 30 day rolling average.	Table 8 to DDDD ^{4,14}
PM ₁₀	0.093	19.6	---	---	---	---	---	Calendar yr, Raw Mill up, ST (3 hr)	BACT ⁷
SO ₂	---	22.0	0.183	---	---	---	---	CEMS 24-hour rolling average	BACT ⁸
	---	---	---	---	---	---	600 @ 7% O ₂	Annual or Greater Method 6 or 6C; or	Table 8 to DDDD ^{4,14}

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Pollutant ¹	Units ²							Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	mg/dscm	ng/dscm TEQ	ppmv d		
								CEMS 30 day rolling average	
NO _x	—	272	2.4	—	—	—	—	CEMS 30 day block average	BACT ^{5,8}
	---	---	---	---	---	---	630 @ 7% O ₂	Annual or Greater Method 7 or 7 E; or CEMS 30 day rolling average	Table 8 to DDDD ^{4,14}
CO	---	400.3	3.34	---	---	---	---	Calendar yr ST (3 hr)	BACT ⁹
	---	---	---	---	---	---	790 @ 7% O ₂	Annual or Greater Method 10; or CEMS 30 day rolling average	Table 8 to DDDD ^{4,14}
VOC	---	18	0.15	—	—	—	—	—	BACT ⁶
VE	---	10% Opacity						Calendar yr ST, 6-min	BACT ¹³
D/F	---	---	---	---	---	0.075 @ 7% O ₂	---	Annual or greater Method 23	Table 8 to DDDD ^{4,10}
	---	---	---	---	---	Or, Total Mass basis: 1.3 @ 7% O ₂	---	Annual or greater Method 23	Table 8 to DDDD ^{4,10}

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Pollutant ¹	Units ²							Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	mg/dscm	ng/dscm TEQ	ppmv d		
Hg	---	---	---	58	---	---	---	SBT or CEMS 30 day rolling average	Rule 62-204.800(9)(f), F.A.C ¹⁴
	97 lbs/ consecutive 12 months	---	---	---	---	---	---	Material Balance	Permit No. 1210465-001-AC/PSD-FL-259 ¹²
HCl	---	---	---	---	---	---	3 @ 7% O ₂	Method 321 or CEMS 30 day rolling average	Table 8 to DDDD ^{4,14}
Cd	---	---	---	---	0.0014@ 7% O ₂	---	---	Annual or greater, Method 29	Table 8 to DDDD ^{4,10}
Pb	---	---	---	---	0.014@ 7% O ₂	---	---	Annual or greater, Method 29	Table 8 to DDDD ^{4,10}

¹ Pollutant: PM = particulate matter; PM₁₀ = PM with a mean diameter of 10 micron or less; SO₂ = sulfur dioxide; NO_x = nitrogen oxides; CO = carbon monoxide; VOC = volatile organic compounds; VE = visible emissions; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride; Cd = cadmium; Pb = lead.

² Units of emission limits: lb/ton-f = pounds per ton of preheater feed; lb/hr = pounds per hour; lb/ton-c = pounds per ton of clinker; lb/Mt-c = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry; mg/dscm = milligrams per dry standard cubic meter.

³ Comp. = method of compliance: ST = stack test; CEMS – continuous emission monitor system; SBT = sorbent trap CEMS; COMS = continuous opacity monitoring system, CPMS = continuous parameter monitoring system.

⁴ 40 CFR 60 Subpart DDDD.

⁵ Emissions of NO_x up to 600 lb/hr for up to one hour in duration shall be allowed for each startup of the pyroprocessing system which occurs when there is no material in the kiln. All valid NO_x hourly averages shall be included into the 30 operating-day block average.

⁶ VOC limit is equivalent to 24 ppmvd @ 7% O₂ of THC. A THC monitor is used to demonstrate compliance with the VOC emissions limit as allowed pursuant to **Condition C.15**. THC emissions shall be expressed as propane.

⁷ The averaging times for PM and PM₁₀ correspond to the required length of sampling for the emission tests.

⁸ The averaging time for NO_x limit shall be a 30 operating-day block average computed in accordance with **Condition C.15**. The averaging time for SO₂ shall be a 24-hour rolling average computed in accordance with **Condition C.15**.

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Pollutant ¹	Units ²							Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	mg/dscm	ng/dscm TEQ	ppmv		
<p>⁹. The averaging time for CO corresponds to the required length of sampling for the initial and subsequent EPA Method 10 emission tests.</p> <p>¹⁰. If conducting stack tests to demonstrate compliance and performance tests for this pollutant for at least 2 consecutive years show that emissions are at or below this limit, permittee can skip testing according to 40 CFR 60.2720 if all of the other provisions of 40 CFR 60.2720 are met.</p> <p>¹¹. The PM performance tests are performed using Method 5 or 5I and consist of three 1-hr tests.</p> <p>¹². The total mass of mercury compounds introduced into the pyroprocessing system as limited in Condition C.14.</p> <p>¹³. The averaging time for visible emissions shall be in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4).</p> <p>¹⁴. 40 CFR 60.2875 defines 30-day rolling average as: “the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.” For Hg, the 30-day rolling average is to be calculated as specified in Rule 62-204.800(9)(f), F.A.C.</p>									

{Permitting Note: These emission limits for EU004, along with annual production limits, effectively limit annual emissions to: PM, 27.3; PM₁₀ at 84% based on AP-42 is, 22.9; SO₂, 88.3; NO_x, 1158.5; CO, 1610.1; VOC, 58.0; HCl, 9.3; Lead, 0.028 and Cadmium, 0.0028 tons per year and Mercury 56 pounds per year. PM, HCl, Lead and Cadmium emissions are based on 5-yr average (2012-2016) PM stack test data of 124,296 dscfm @ 7% O₂}

[Rules 62-212.400 (BACT) & 62-204.800(9)(f), F.A.C.; and Permit Nos. 1210465-001-AC/PSD-FL-259, 1210465-004-AC/PSD-FL-259C, 1210465-008-AC/PSD-FL-259D, 1210465-011-AC/PSD-FL-259F, 1210465-026-AC, 1210465-034-AC, 1210465-037-AC/PSD-FL-259J, 1210465-039-AC, & 1210465-040-AC]

C.30. Applicability of Emission Limits. The emission limitations apply at all times the EU is operating including and not limited to startup, shutdown, or malfunction. [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2670(a)]

Performance Testing

C.31. PM CPMS Requirements. If the permittee uses a PM CPMS to demonstrate compliance, the permittee shall establish the PM CPMS operating limit and determine compliance with it according to paragraphs (i)(1) through (5) of 40 CFR 60.2675. [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2675]

C.32. Initial and Annual Performance Testing.

- a. All performance tests shall consist of a minimum of three test runs conducted under conditions representative of normal operations.
- b. The permittee shall document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in 40 CFR 60.2740(b)(1)) and the types of waste burned during the performance test.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2690]

C.33. Initial Performance Date Deadline. The initial performance test shall be conducted no later than 180 days after the final compliance date of February 7, 2018. [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2705(a)]

C.34. Initial Air Pollution Control Device Inspection.

- a. The initial air pollution control device inspection shall be conducted within 60 days after installation of the control device and the kiln reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations.

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- b. Within 10 operating days following an air pollution control device inspection, all necessary repairs shall be completed unless the owner or operator obtains written approval from the Department establishing a date whereby all necessary repairs of the designated facility shall be completed.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2706]

Continuous Compliance

C.35. CO Compliance. For facilities using a CEMS to demonstrate compliance with the CO emission limit, compliance with the CO emission limit may be demonstrated by using the CEMS according to 40 CFR 60.2710(g) or periodic stack testing by Method 10 pursuant to 40 CFR 60.2710(b). [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2710(g)]

C.36. Exemptions During Performance Testing. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in **Condition C.29.**, constitutes a deviation from the permittee's DDDD operating limits, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests. [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2710(c)]

C.37. HCl and Hg Compliance. If the permittee does not use an acid gas wet scrubber or dry scrubber, the permittee must determine compliance with the HCl emissions limit according to the requirements in paragraph 40 CFR 60.2710 (j)(1). The permittee shall determine compliance with the mercury emissions limit using a mercury CEMS according to paragraph 40 CFR 60.2710 (j)(2). [Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2710(j)]

C.38. Interval of Annual Performance Tests.

- a. The permittee shall conduct annual performance tests between 11 and 13 months of the previous performance test.
- b. The permittee shall repeat the performance test if the feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2715 and 40 CFR 60.2725]

C.39. Alternate Interval of Performance Testing. The permittee shall conduct annual performance tests according to the schedule specified in **Condition C.38a.**, with the following exceptions:

- a. The permittee may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in 40 CFR 60.2725. The Department may request a repeat performance test at any time.
- b. The permittee shall repeat the performance test within 60 days of a process change, as defined in 40 CFR 60.2875. Process change means any of the following physical or operational changes:
- (1) A physical change (maintenance activities excluded) to the DDDD unit which may increase the emission rate of any air pollutant to which a standard applies;
 - (2) An operational change to the DDDD unit where a new type of non-hazardous secondary material is being combusted;
 - (3) A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the DDDD unit (e.g., replacing an electrostatic precipitator with a fabric filter); and
 - (4) An operational change to the air pollution control devices used to comply with the emission limits for the affected DDDD unit (e.g., change in the sorbent injection rate used for activated carbon injection).
- c. If the initial or any subsequent performance test for any pollutant listed in Table 8 of Subpart DDDD (**Condition C.29**) demonstrates that the emission level for these pollutants are equal to 75% of the

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applicable emission limits, the permittee is not required to conduct a performance test for the pollutant in response to a request by the Department to repeat a performance test or repeat the performance test within 60 days of a process change. The permittee may elect to skip conducting a performance test for the pollutant for the next 2-years. The permittee shall conduct a performance test for the pollutant during the third year and no more than 37-months following the previous performance test for the pollutant. For cadmium and lead, emissions shall be emitted at emission levels no greater than their respective emission levels equal to 75% of the applicable emission limit in **Condition C.29** to qualify for less frequent testing under 60.2720(a)(3).

- d. If the permittee is conducting less frequent testing for a pollutant as provided above and a subsequent performance test for the pollutant indicates that the DDDD unit does not meet the emission level specified in paragraph (c) above, the permittee shall conduct annual performance tests for the pollutant according to the schedule specified in Specific Condition C.34.a. until the permittee qualifies for less frequent testing for that pollutant.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2720(a) and 60.2875]

C.40. Required Monitoring Equipment.

- a. HCl. For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of HCl testing with EPA Method 321 at 40 CFR 63, Appendix A, the permittee shall install, calibrate, maintain, and operate a CEMS for monitoring HCl emissions, as specified in 40 CFR 60.2710(j), discharged to the atmosphere and record the output of the system.
- b. PM. To demonstrate continuous compliance with the PM emissions limit, the facility may substitute use of either a PM CEMS or a PM CPMS for conducting the PM annual performance test and other CMS monitoring for PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).
- c. NOx. To demonstrate continuous compliance with the NOx emissions limit, the facility may substitute use of a CEMS for the NOx annual performance test to demonstrate compliance with the NOx emissions limits and monitoring the charge rate, secondary chamber temperature and reagent flow for selective noncatalytic reduction, if applicable.
- d. Hg. Waste-burning kilns shall install, calibrate, maintain, and operate a mercury CSM as specified in rule 62-204.800(9)(f), F.A.C.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2730(g-h) & (k) and 40 CFR 60.2710(j)]

- C.41. CEMS Data During Startup and Shutdown.** “CEMS data during startup and shutdown”, is defined as: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

*{Permitting Note: CEMS data during startup and shutdown, as defined above, are not corrected to 7% oxygen, and are measured at stack oxygen content. Also see **Condition C.30**}*

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2875 and 60.2710]

- C.42. Control Equipment Inspections.** If the permittee uses an air pollution control device to meet the emission limitations in DDDD, the permittee shall conduct an initial and annual inspection of the air pollution control device. The inspection shall include, at a minimum, the following:

- a. Inspect air pollution control device(s) for proper operation; and

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- b. Develop a site-specific monitoring plan according to the requirements in **Specific Condition C.40**. This requirement also applies to the permittee if the permittee petitions the EPA Administrator for alternative monitoring parameters under 40 CFR 60.13(i).

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2710(k)]

C.43. CMS Monitoring Plan. For each CMS required in 40 CFR 60.2710, the permittee shall develop and submit to the EPA Administrator for approval, a site-specific monitoring plan according to a.(1) through (6) of this condition:

- a. The permittee shall submit this site-specific monitoring plan at least 60 days before the permittee's initial performance evaluation of the CMS:
- (1) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);
 - (2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems;
 - (3) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations);
 - (4) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 60.11(d);
 - (5) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 60.13; and
 - (6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR 60.7(b), (c), (c)(1), (c)(4), (d), (e), (f) and (g).
- b. The permittee shall conduct a performance evaluation of each CMS in accordance with the site-specific monitoring plan.
- c. The permittee shall operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2710(l)]

Operator Training and Qualifications

C.44. Operator Training and Qualification Requirements.

- a. No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, the permittee shall follow the procedures in §60.2665.
- b. Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph c of this condition.
- c. Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described below:
- (1) Training on the following eleven subjects:
 - (a) Environmental concerns, including types of emissions;
 - (b) Basic combustion principles, including products of combustion;
 - (c) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;
 - (d) Combustion controls and monitoring;
 - (e) Operation of air pollution control equipment and factors affecting performance (if applicable);
 - (f) Inspection and maintenance of the incinerator and air pollution control devices;

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- (g) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;
- (h) Bottom and fly ash characteristics and handling procedures;
- (i) Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;
- (j) Pollution prevention; and
- (k) Waste management practices.
- (2) An examination designed and administered by the instructor.
- (3) Written material covering the training course topics that can serve as reference material following completion of the course.
- d. The operator training course must be completed by the later of:
 - (1) February 7, 2018;
 - (2) Six months after CISWI unit startup; and
 - (3) Six months after an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.
- e. To maintain qualification, the permittee must complete an annual review or refresher course covering, at a minimum, the following five topics:
 - (1) Update of regulations;
 - (2) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;
 - (3) Inspection and maintenance;
 - (4) Prevention and correction of malfunctions or conditions that may lead to malfunction; and
 - (5) Discussion of operating problems encountered by attendees.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2635]

Recordkeeping and Reporting Requirements

C.45. Site-Specific Operator Training Documentation.

- a. Documentation shall be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs a. (1) through (10) below. The permittee shall maintain this information and the training records required by paragraph c. of this condition in a manner that they can be readily accessed and are suitable for inspection upon request:
 - (1) Summary of the applicable standards under Subpart DDDD;
 - (2) Procedures for receiving, handling, and charging waste;
 - (3) Incinerator startup, shutdown, and malfunction procedures;
 - (4) Procedures for maintaining proper combustion air supply levels;
 - (5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under Subpart DDDD;
 - (6) Monitoring procedures for demonstrating compliance with the incinerator operating limits;
 - (7) Reporting and recordkeeping procedures;
 - (8) The waste management plan required under 40 CFR 60.2620 through 60.2630;
 - (9) Procedures for handling ash; and
 - (10) A list of the wastes burned during the performance test.
- b. The permittee shall establish a program for reviewing the information listed in paragraph a. above, with each incinerator operator:
 - (1) The initial review of the information listed in paragraph a. of this condition shall be conducted by the later of the following three dates:
 - (a) February 7, 2018;
 - (b) Six months after CISWI unit startup; and
 - (c) Six months after being assigned to operate the CISWI unit.

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- (2) Subsequent annual reviews of the information listed in paragraph a. above must be conducted no later than 12 months following the previous review
- c. The permittee shall also maintain the information specified below:
 - (1) Records showing the names of CISWI unit operators who have completed review of the information in 40 CFR 60.2660(a) as required by 40 CFR 60.2660(b), including the date of the initial review and all subsequent annual reviews;
 - (2) Records showing the names of the CISWI operators who have completed the operator training requirements under 40 CFR 60.2635, met the criteria for qualification under 40 CFR 60.2645, and maintained or renewed their qualification under 40 CFR 60.2650 or 60.2655. Records shall include documentation of training, the dates of the initial refresher training, and the dates of their qualification and all subsequent renewals of such qualifications; and
 - (3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2660 and 60.2665]

C.46. Records. The permittee shall maintain the items (as applicable) as specified below for a period of at least 5 years:

- a. Calendar date of each record;
- b. Records of the data described below:
 - (1) The CISWI unit charge dates, times, weights, and hourly charge rates;
 - (2) For affected CISWI units that establish operating limits for controls other than wet scrubbers under Rule 62-204.800(9)(f), F.A.C., referencing §60.2675(d) through (g) or §60.2680, the permittee shall maintain data collected for all operating parameters used to determine compliance with the operating limits.
 - (3) If a fabric filter is used to comply with the emission limitations, the permittee shall record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. The permittee shall also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in 40 CFR 60.2675(c), referenced by Rule 62-204.800(9)(f), F.A.C.
- c. Identification of calendar dates and times for which data show a deviation from operating limits established under 40 CFR 60.2675(d) through (g) or 40 CFR 60.2680, referenced by Rule 62-204.800(9)(f), F.A.C., with a description of the deviations, reasons for such deviations, and a description of corrective actions taken.
- d. The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations.
- e. Records showing the names of CISWI unit operators who have completed review of the information in **Condition C.45.a.** as required by **Condition C.45.b.**, including the date of the initial review and all subsequent annual reviews.
- f. Records showing the names of the CISWI operators who have completed the operator training requirements under 40 CFR 60.2635 (**Condition C.44**), met the criteria for qualification under 40 CFR 60.2645, and maintained or renewed their qualification under 40 CFR 60.2650 or 40 CFR 60.2655, all referenced by Rule 62-204.800(9)(f), F.A.C. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications.
- g. For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

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- h. Records of calibration of any monitoring devices as required under 40 CFR 60.2730, referenced by Rule 62-2024.800(9)(f), F.A.C.
- i. Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment.
- j. The information listed in **Condition C.45.a.**
- k. On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required).
- l. Maintain records of the annual air pollution control device inspections that are required for the kiln, any required maintenance and any repairs not completed within 10 days of an inspection or the timeframe established by the Department.
- m. For continuously monitored pollutants or parameters, the permittee shall document and keep a record of the following parameters measured using continuous monitoring systems:
 - (1) All 1-hour average concentrations of SO₂, NO_x, CO, Hg, PM –CPMS, HCl DDDD limit emissions. The permittee shall indicate which data are CEMS data during startup and shutdown;
 - (2) All 1-hour average percent oxygen concentrations.
- n. If the permittee chooses to stack test less frequently than annually, consistent with §60.2720(a) through (c), referenced by Rule 62-204.800(9)(f), F.A.C., the permittee shall keep annual records that document that the permittee's emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.
- o. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
- p. Records of all required maintenance performed on the air pollution control and monitoring equipment.
- q. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- r. For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the permittee shall keep a record which documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1). If the unit combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4), the permittee shall keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2 and each of the legitimacy criteria in 40 CFR 241.3(d)(1). If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the permittee shall keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel pursuant to 40 CFR 241.4, the permittee shall keep records documenting that the material is a listed non-waste under 40 CFR 241.4(a). [Link to 40 CFR 241.](#)

[Rule 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2740 (a), (b)(1)(5-6), (e-m), (n)(2-4)(6)(8-9), (q-u)]

C.47. Initial Test Report. The initial test report shall be submitted to EPA electronically using the EPA Electronic Reporting Tool (ERT) within 60-days following the initial performance test including the information specified in Table 5 to 40 CFR 60, Subpart DDDD. [Rule 62-204.800(9)(f) referencing 40 CFR 60.2760 and Table 5 of NSPS Subpart DDDD]

C.48. EPA Annual Report. The annual report shall be submitted to EPA electronically using the EPA ERT no later than 12 months following the submission of the initial test report and subsequent reports including the

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information specified Table 5 to 40 CFR 60, Subpart DDDD. [Rule 62-204.800(9)(f) F.A.C. referencing 40 CFR 60.2767, 60.2770 and Table 5 of NSPS Subpart DDDD]

C.49. Semi-Annual Deviation Report. The emissions limitation or operating limit deviation report shall be submitted to EPA electronically using the EPA ERT by August 1st of that year for data collected during the first half of the calendar year and by February 1st of the following year for data collected during the second half of the calendar year. The deviation report shall include the information specified in Table 5 in NSPS Subpart DDDD. *{Permitting Note: The information in this report shall be included in the semi-annual monitoring report required in **Condition FW11.**}* [Rule 62-204.800(9)(f), F.A.C. referencing 40 CFR 60.2775, 60.2780 and Table 5 of NSPS Subpart DDDD]

C.50. Report Submittal.

- a. The permittee shall submit initial, annual, deviation reports, results of each performance test and CEMS performance evaluation electronically on or before the submittal due dates specified in **Conditions C.47 - C.49.**
- b. The Reports shall be submitted to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI) (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www.epa.gov/chief>), once the XML schema is available. If the reporting form specific to Subpart DDDD, is not available in CEDRI at the time that the report is due, submit the report to EPA Region IV Director at Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, 61 Forsyth St. SW., Suite 9T43, Atlanta, Georgia 30303-8960. Once the form has been available in CEDRI for 90 calendar days, the permittee shall begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in **Conditions C.47 - C.49**, regardless of the method in which the report is submitted.
- c. All documents related to compliance activities such as reports, tests, and notifications (as specified in **Conditions C.47 - C.49**) submitted in a manner outlined in paragraph b. of this condition, shall also be submitted to the Compliance Authority listed on the cover page of this permit.

[Rules 62-4.160(15)., 62-213.440(1)(b)., & 62-204.800(9)(f), F.A.C., referencing 40 CFR 60.2795]

Conditions C.51 to C.86 apply only if the kiln unit is subject to LLL.

C.51. Permitted Maximum Allowable Emission Rate when Kiln is Subject to LLL. The permitted maximum allowable emission rate for each pollutant is as follows:

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Pollutant ¹	Units ²						Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	ng/dscm TEQ	ppmvd		
PM	0.11	23.1	---	---	---	---	Calendar yr, Raw Mill up, ST (3 hr)	BACT ^{7,11}
	---	---	0.07	---	---	---	CPMS (30d) and ST (3 hr)	LLL ^{4,7,11} 40 CFR 63.1343(b) Table 1
PM ₁₀	0.093	19.6	---	---	---	---	Calendar yr, Raw Mill up, ST (3 hr)	BACT ⁷
SO ₂	---	22.0	0.183	---	---	---	CEMS 24-hour rolling average	BACT ⁸
NO _x	---	272	2.4	---	---	---	CEMS 30-day block average	BACT ^{5,8}
CO	---	400.3	3.34	---	---	---	Calendar yr ST (3 hr)	BACT ⁹
VOC	—	18	0.15	—	—	—	THC CEMS 30 day rolling average	BACT ⁶
VE	10% Opacity						Calendar yr ST 6-min	BACT ¹⁴
D/F	---	---	---	---	0.20 @ 7% O ₂	---	ST (3 x 3hr) T > 400 deg F	LLL ⁴ 40 CFR 63.1343(b) Table 1
	---	---	---	---	0.40 @ 7% O ₂	---	ST (3 x 3hr) T ≤ 400 deg F	LLL ^{4,10} 40 CFR 63.1343(b) Table 1
THC	---	---	---	---	---	24 @ 7% O ₂	CEMS 30 day rolling average	LLL ^{4,6} 40 CFR 63.1343(b) Table 1
Hg	---	---	---	55	---	---	SBT or CEMS 30 day rolling average	LLL ^{4,12} 40 CFR 63.1343(b) Table 1
	97 lbs/ consecutive 12 months	---	---	---	---	---	Material Balance	Permit No. 1210465-001-AC/PSD-FL-259 ¹³

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Pollutant ¹	Units ²						Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	ng/dscm TEQ	ppmvd		
HCl	---	---	---	---	---	3 @ 7% O ₂	CEMS 30 day rolling average	LLL ^{4,15} 40 CFR 63.1343(b) Table 1
Startup Shutdown	Work practices per 40 CFR 63.1346(g)							LLL ⁴ 40 CFR 63.1343(b) Table 1

¹ Pollutant: PM = particulate matter; PM₁₀ = PM with a mean diameter of 10 micron or less; SO₂ = sulfur dioxide; NO_x = nitrogen oxides; CO = carbon monoxide; VOC = volatile organic compounds; VE = Visible Emissions; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride.

² Units of emission limits: lb/ton-f = pounds per ton of preheater feed; lb/hr = pounds per hour; lb/ton-c = pounds per ton of clinker; lb/Mt-c = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry.

³ Comp. = method of compliance: ST = annual or periodic stack test; CEMS – continuous emission monitor system; SBT = sorbent trap CEMS; CPMS = continuous parameter monitoring system.

⁴ 40 CFR 63 Subpart LLL.

⁵ Emissions of NO_x up to 600 lb/hr for up to one hour in duration shall be allowed for each startup of the pyroprocessing system which occurs when there is no material in the kiln. All valid NO_x hourly averages shall be included into the 30 operating-day block average.

⁶ A total hydrocarbon (THC) monitor is used to demonstrate compliance with the VOC emissions limit as allowed pursuant to **Condition C.15**. THC emissions shall be expressed as propane. Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP. THC reported as propane, on a rolling 30 kiln-operating day average (excluding periods of startup and shutdown).

⁷ The averaging times for PM and PM₁₀ correspond to the required length of sampling for the emission tests.

⁸ The averaging time for NO_x limit shall be a 30 operating-day block average computed in accordance with **Condition C.15**. The averaging time for SO₂ shall be a 24-hour rolling average computed in accordance with **Condition C.15**.

⁹ The averaging time for CO corresponds to the required length of sampling for the initial and subsequent EPA Method 10 emission tests.

¹⁰ When the average of the performance test run average temperatures at the inlet to particulate matter control device is 204° C (400° F) or less. Testing is required every 30 months as stated in **Condition C.59**.

¹¹ The PM performance tests are performed using Method 5 or 5I and consist of three 1-hr tests.

¹² Hg CEMS can be used in lieu of sorbent trap CEMS to show compliance.

¹³ The total mass of mercury compounds introduced into the pyroprocessing system as limited in **Condition C.14.**, together with the associated material balance compliance methods that were included in the original facility permit No. 1210465-001-AC (PSD-FL-259) and subsequent revisions is applicable until the compliance date of 40 CFR 63 Subpart LLL.

¹⁴ The averaging time for visible emissions shall be in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4).

¹⁵ 40 CFR 63. 1349(b)(6)(v)(H), HCl CPMS allowed until July 25, 2017 or later if rule extension approved.

{Permitting Note: These emission limits for EU004, along with annual production limits, effectively limit annual emissions to: PM, 33.8; PM₁₀, at 84% of PM based on AP-42 is 28.5; SO₂, 88.3; NO_x, 1158.5; CO, 1610.1; VOC; 58.0; HCl, 9.3 tons per year; and Hg, 53.1 pounds per year. HCl emissions are based on a 5-yr average (2012-2016) PM stack test data of 124,296 dscfm @ 7% O₂.}

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{Permitting Note: The THC emission standard of 24 ppmvd @7% O₂ is equivalent to the revised BACT VOC emission standard of 0.15 lb/ton of clinker.}

[Rules 62-212.400, F.A.C., and BACT; Rule 62-204.800, F.A.C.; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-004-AC/PSD-FL-259C; 1210465-008-AC/PSD-FL-259D; 1210465-011-AC/PSD-FL-259F; 1210465-026-AC; 1210465-034-AC; 1210465-037-AC/PSD-FL-259J; 1210465-039-AC/PSD-FL-259K&432; & 1210465-040/PSD-FL-259L; and 40 CFR 63.1343(a); 40 CFR 63.1343(b) Table 1;]

C.52. LLL Operating Limits for In-line Kiln/Raw Mills.

- a. Temperature. The owner or operator operates an in-line kiln/raw mill subject to a D/F emission limitation under 40 CFR 63.1343. The owner or operator must operate the in-line kiln/raw mill, such that:
 - (1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this Condition and established during the performance test when the raw mill was operating is not exceeded, except during periods of startup and shutdown when the temperature limit may be exceeded by no more than 10 percent.
 - (2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this Condition and established during the performance test when the raw mill was not operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.
- b. Temperature Limit. The temperature limit for affected sources meeting the limits of paragraph (a) or paragraphs (a)(1) through (a)(3) of this Condition is determined in accordance with 40 CFR 63.1349(b)(3)(iv).

[Rule 62-204.800, F.A.C.; and 40 CFR 63.1346(a), (b)]

C.53. LLL Startup and Shutdown Requirements. During periods of startup and shutdown the requirements listed in paragraphs (1) through (4) of this Condition must be met.

- a. During startup, any one or combination of the following clean fuels must be used: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1200 degrees Fahrenheit.
- b. Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 degrees Fahrenheit.
- c. All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five-minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.
- d. Records as specified in 40 CFR 63.1355 must be kept during periods of startup and shutdown.

[Rule 62-204.800, F.A.C.; and 40 CFR 63.1346(g)]

Monitoring of Operations

C.54. LLL Operations and Maintenance Plan. The owner or operator shall prepare for each affected source subject to the provisions of 40 CFR 63 Subpart LLL, a written operations and maintenance plan. The plan must include the information required in 40 CFR 63.1347. [Rule 62-204.800, F.A.C.; and 40 CFR 63.1347]

C.55. LLL Monitoring Requirements.

- a. Following the compliance date, the owner or operator must demonstrate compliance with 40 CFR 63 Subpart LLL on a continuous basis by meeting the requirements of 40 CFR 63.1350.
- b. For each existing unit that is equipped with a CMS, maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests.

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- c. Any instance where the owner or operator fails to comply with the continuous monitoring requirements of 40 CFR 63.1350 is a violation.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1),(3),(4)]

C.56. LLL Particulate Matter Monitoring Requirements.

- a. PM CPMS. A PM CPMS shall be used to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The PM performance test shall be conducted using Method 5 or Method 5I of Appendix A-3 of 40 CFR 60. The PM CPMS shall be used to demonstrate continuous compliance with this operating limit. The performance test must be repeated annually and the site-specific operating limit reassessed and adjusted in accordance with the results of the performance test using the procedures in 40 CFR 63.1349(b)(1) (i) through (vi). The test must also be repeated if the analytical range of the instrument is changed, or if the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration is replaced.
- b. To determine continuous compliance, the PM CPMS output data must be used for all periods when the process is operating and the PM CPMS is not out-of-control. Continuous compliance must be demonstrated by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.
- c. For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the owner or operator must:
 - (1) Within 48 hours of the exceedance, visually inspect the APCD;
 - (2) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
 - (3) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. Additional testing is not required to be conducted for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
- d. PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of 40 CFR 63 Subpart LLL.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(b)(1)]

C.57. LLL Clinker Production Monitoring Requirements. In order to determine clinker production, the owner or operator must:

- a. Determine hourly clinker production by one of two methods:
 - (1) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ± 5 percent accuracy, or
 - (2) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ± 5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the new ratio going forward must be used, but the clinker production rates previously estimated do not have to be retroactively changed.

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- b. Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, the permittee must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow).
- c. If clinker production is measured directly, record the daily clinker production rates; if the kiln feed rates are measure and the clinker production calculated, record the hourly kiln feed and clinker production rates.
- d. Develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of 40 CFR 63.1350.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(d)(1)(i),(ii),(2),(3),(4)]

C.58. LLL Dioxin/Furans Emissions Monitoring/Temperature. D/F emissions shall be monitored in accordance with paragraphs (1) through (6) of 40 CFR 63.1350(g) and paragraphs (1) through (4) of 40 CFR 63.1350(m) to demonstrate continuous compliance with the D/F emissions standard. An emissions monitoring plan must also be developed in accordance with paragraphs (1) through (4) of 40 CFR 63.1350(p). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(g); Permit Nos.1210465-001-AC/PSD-FL-259; 1210465-004-AC/PSD-FL-259C; 1210465-011-AC/PSD-FL-259F]

C.59. LLL THC Emissions Monitoring. A continuous emission monitor for emissions of total hydrocarbon shall be in accordance with paragraphs (1) and (2) of 40 CFR 63.1350(i) and paragraphs (1) through (4) of 40 CFR 63.1350(m). An emissions monitoring plan must also be developed in accordance with paragraphs (1) through (4) of 40 CFR 63.1350(p). [Permit No.1210465-001-AC/PSD-FL-259; Permit Nos.1210465-004-AC/PSD-FL-259C; 1210465-011-AC/PSD-FL-259F; Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(i)]

C.60. LLL Total Organic HAP Monitoring. If the permittee is complying with the total organic HAP emissions limits, THC must be continuously monitored according to paragraph (1) and (2) of 40 CFR 63.1350(i) or in accordance with Performance Specification 8 or Performance Specification 8A of Appendix B to 40 CFR 60 and comply with all of the requirements for continuous monitoring systems found in 40 CFR 63 Subpart A- General Provisions. Each CEMS must be operated and maintained according to the quality assurance requirements in Procedure 1 of Appendix F of 40 CFR 60. In addition, the monitoring requirements in paragraphs (1) through (4) of 40 CFR 63.1350(m) must be followed. An emissions monitoring plan must also be developed in accordance with paragraphs (1) through (4) of 40 CFR 63.1350(p). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(j)]

C.61. LLL Mercury Monitoring. A mercury continuous emissions monitoring system (Hg CEMS) must be installed and operated in accordance with Performance Specification 12A (PS 12A) of Appendix B of 40 CFR 60 or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of Appendix B 40 CFR 60. Mercury must be monitored continuously according to paragraphs (1) through (5) of 40 CFR 63.1350(k). An emissions monitoring plan must also be developed in accordance with paragraphs (1) through (4) of 40 CFR 63.1350(p).

If an integrated sorbent trap monitoring system conforming to PS 12B is operated, the permittee may use a monitoring period at least 24 hours but no longer than 168 hours in length may be used. A monitoring period that is a multiple of 24 hours (except during relative accuracy testing as allowed in PS 12B) should be used. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(k),(k)(6)]

C.62. LLL HCl Monitoring Requirements. HCl emissions must be monitored continuously according to paragraph (1) or (2) of 40 CFR 63.1350(l) and paragraphs (1) through (4) of 40 CFR 63.1350(m) or if the kiln is controlled using a dry scrubber, the permittee may alternatively parametrically monitor SO₂ emissions continuously according to paragraph (3) of 40 CFR 63.1350(l). An emissions monitoring plan must also be

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developed in accordance with paragraphs (1) through (4) of 40 CFR 63.1350(p). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(l)(1),(2),(3)]

- C.63. LLL Parameter Monitoring Requirements.** If the permittee has an operating limit that requires the use of a CMS, the permittee must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in paragraphs (1) through (4) of 40 CFR 63.1350(m) by the compliance date specified in 40 CFR 63.1351. The permittee must also meet the applicable specific parameter monitoring requirements in paragraph (m)(9). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(m)(1)-(4), (9)]
- C.64. LLL Continuous Flow Rate Monitoring.** The permittee must install, operate, calibrate, and maintain instruments, according to the requirements in paragraphs (1) through (10) of 40 CFR 63.1350(n), for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit and that is required to be monitored by a CEMS. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(n)]
- C.65. LLL Development and Submittal (upon request) of Monitoring Plans.** If compliance with any applicable emissions limit is demonstrated through performance stack testing or other emissions monitoring, a site-specific monitoring plan must be developed according to the requirements in paragraphs (1) through (4) of CFR 63.1350(p). This requirement also applies if the owner or operator petitions the EPA Administrator for alternative monitoring parameters under paragraph (o) of 40 CFR 63.1350 and 40 CFR 63.8(f). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(p)]
- C.66. LLL Continuous Monitoring Requirements.** Compliance must be demonstrated with the emissions standards and operating limits of 40 CFR 63 Subpart LLL by using the performance test methods and procedures in 40 CFR 40 CFR 63.1350 and 63.8 for each affected source. This emissions unit shall comply with the requirements of 40 CFR 63.1348(b)(1), (2), (4), (6), (7), (8) and (9). [Rule 62-204.800, F.A.C.; and 40 CFR 63.1348(b)(1), (2), (4), (6), (7), (8), (9)]
- C.67. LLL Changes in Operations.** If the owner or operator plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR 63 Subpart LLL, the source must conduct a performance test as specified in 40 CFR 63.1349(b). The source shall also comply with the requirements of 40 CFR 63.1348(c)(2). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(c)]
- C.68. LLL General Duty to Minimize Emissions.** Any affected source shall meet the requirements of 40 CFR 63.1348(d). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(d)]

Test Methods and Procedures

- C.69. LLL Initial Performance Test Requirements.** For an affected source subject to 40 CFR 63 Subpart LLL, compliance with the emissions standards and operating limits must be demonstrated by using the test methods and procedures in 40 CFR 40 CFR 63.1349 and 63.7. If the kiln has been subject to DDDD conditions in **Conditions C.4 – C.28** and is now electing to cease burning nonhazardous solid waste and become subject to 40 CFR 63 Subpart LLL, the kiln must meet all the initial compliance testing requirements each time it becomes subject to 40 CFR 63 Subpart LLL, even if it was previously subject to 40 CFR 63 Subpart LLL.

The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or 12B) acceptance criteria. The performance test period is complete at the end of the 30th consecutive operating day. See 40 CFR 63.1341 for definition of operating day and 40 CFR 63.1348(b)(1) for the CEMS operating

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requirements. The source has the option of performing the compliance test earlier than the compliance date if desired.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(a)]

C.70. LLL Initial THC Compliance.

- a. Because are subject to limitations on THC emissions under 40 CFR 63.1343(b), permittee must demonstrate compliance with the THC emissions standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(4)(i) contained in Appendix NESAHP 40 CFR 63 Subpart LLL. The permittee must use the average THC concentration obtained during the first 30 kiln operating days after the compliance date of 40 CFR 63 Subpart LLL to determine initial compliance.
- b. The time weighted average THC concentration measured during the initial performance test specified by 40 CFR 63.1349(b)(4) contained in Appendix NESAHP 40 CFR 63 Subpart LLL must be used to determine the site-specific THC limit. Using the fraction of time the inline kiln/raw mill is on and the fraction of time that the inline kiln/raw mill is off, calculate this limit as a time weighted average of the THC levels measured during raw mill on and raw mill off testing using one of the two approaches in 40 CFR 63.1349(b)(7)(vii) or (viii) contained in Appendix NESAHP 40 CFR 63 Subpart LLL depending on the level of organic HAP measured during the compliance test.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(a)(4)(i),(v)]

C.71. LLL Initial Mercury Compliance. Because the permittee are subject to limitations on mercury emissions in 40 CFR 63.1343(b), the permittee must demonstrate compliance with the mercury standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(5) contained in Appendix NESAHP 40 CFR 63 Subpart LLL. The permittee must demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. Compliance with the mercury emissions standard must be determined based on the first 30 operating days the permittee operates a mercury CEMS or sorbent trap monitoring system after the compliance date of this rule.

- a. In calculating a 30 operating day emissions value using an integrating sorbent trap CEMS, assign the average Hg emissions concentration determined for an integrating period (e.g., 7 day sorbent trap monitoring system sample) to each relevant hour of the kiln operating days spanned by each integrated sample. Calculate the 30 kiln operating day emissions rate value using the assigned hourly Hg emissions concentrations and the respective flow and production rate values collected during the 30 kiln operating day performance test period. Depending on the duration of each integrated sampling period, the permittee may not be able to calculate the 30 kiln operating day emissions value until several days after the end of the 30 kiln operating day performance test period.
- b. For example, a sorbent trap monitoring system producing an integrated 7-day sample will provide Hg concentration data for each hour of the first 28 kiln operating days (i.e., four values spanning 7 days each) of a 30 operating day period. The Hg concentration values for the hours of the last 2 days of the 30 operating day period will not be available for calculating the emissions for the performance test period until at least five days after the end of the subject period.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(a)(5)]

C.72. LLL Initial HCl Compliance. Because the permittee is subject to limitations on HCl emissions under 40 CFR 63.1343(b), the permittee must demonstrate initial compliance with the HCl standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(6).

- a. For an affected source that is equipped with a dry scrubber, the permittee may demonstrate initial compliance by conducting a performance test as specified in 40 63.1349(b)(6)(i). The permittee must determine the HCl concentration for each run and calculate the arithmetic average of the concentrations measured for the three runs to determine compliance. The permittee must also establish appropriate site-specific operational parameter limits.

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- b. For an affected source that is not equipped with a wet scrubber, tray tower or dry scrubber, the permittee must demonstrate initial compliance by operating a CEMS as specified in 40 CFR 63.1349(b)(6)(ii). The permittee must use the average of the hourly HCl values obtained during the first 30 kiln operating days that occur after the compliance date of this rule to determine initial compliance.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(a)(6)]

C.73. LLL PM Emissions Tests. The owner or operator of a kiln and clinker cooler subject to limitations on PM emissions shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at Appendix A-3 to 40 CFR 60. The permittee must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). The owner or operator shall also comply with the requirements of 40 CFR 63.1349(b)(1). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(1)]

C.74. LLL D/F Emissions Tests.

- a. The permittee must conduct a performance test using Method 23 of Appendix A-7 to 40 CFR 60. The owner or operator shall also comply with the requirements of 40 CFR 63.1349(b)(3). Except as provided in 40 CFR 63.1348(b), performance tests are required at regular intervals for affected sources that are subject to a dioxin emissions limit. Performance tests required every 30 months must be completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(3); 40 CFR 63.1349(c)]
- b. D/F Testing – Bottom Ash. At least one of the first two required stack tests for dioxins/furans conducted after first use of bottom ash shall be conducted while using bottom ash unless the applicant ceases usage of bottom ash.

{Permitting Note: This condition is not intended to require additional testing beyond that already required by the other presently applicable permits or the requirements of the Cement NESHAP. It also provides for the possibility that at the time of the first required dioxin/furan test conducted after first use of bottom ash that bottom ash compatible with the project objectives has not yet been determined or is not available in sufficient quantity to conduct a test.}

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C.75. LLL THC Emissions Test.

- a. If the permittee is subject to limitations on THC emissions, the permittee must operate a CEMS in accordance with the requirements in 40 CFR 63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvw and the reference method (RM) is Method 25A of Appendix A to 40 CFR 60.
- b. Use the THC CEMS to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. See 40 CFR 63.1348(a).
- c. Instead of conducting the performance test specified in 40 CFR 63.1349(b)(4), the permittee may conduct a performance test to determine emissions of total organic HAP by following the procedures in 40 CFR 63.1349(b)(7).

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(4)(i),(ii),(v)]

C.76. LLL Mercury Emissions Tests. Because the permittee are subject to limitations on mercury emissions, the permittee must operate a mercury CEMS or a sorbent trap monitoring system in accordance with the requirements of 40 CFR 63.1350(k). The initial compliance test must be based on the first 30 kiln operating days in which the affected source operates using a mercury CEMS or a sorbent trap monitoring system after the compliance date of the rule. See 40 CFR 63.1348(a). The owner or operator shall also comply with paragraphs (i) and (ii) of 40 CFR 63.1349(b)(5). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(5)]

C.77. LLL HCl Emissions Tests. For a source subject to limitations on HCl emissions the permittee must conduct performance testing by one of the following methods.

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- a.
- (1) If the source is equipped with a dry scrubber, the permittee must conduct performance testing using Method 321 of Appendix A to Part 63 unless the permittee has installed a CEMS that meets the requirements 40 CFR 63.1350(l)(1). For kilns with inline raw mills, testing should be conducted for the raw mill on and raw mill off conditions.
 - (2) The permittee must establish site specific parameter limits by using the CPMS required in 40 CFR 63.1350(l)(1). For a dry scrubber, measure and record the sorbent injection rate in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average sorbent injection rate and average sorbent injection rate for each sampling run in which the applicable emissions limit is met.
- b.
- (1) The permittee must operate a CEMS in accordance with the requirements of 40 CFR 63.1350(l)(1). See 40 CFR 63.1348(a).
 - (2) The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of 40 CFR 63 Subpart LLL in which the affected source operates using an HCl CEMS. Hourly HCl concentration data must be obtained according to 40 CFR 63.1350(l).
- c. As an alternative to paragraph (a)(2) of this Condition, the permittee may choose to monitor SO₂ emissions using a CEMS in accordance with the requirements of 40 CFR 63.1350(l)(3). The permittee must establish an SO₂ operating limit equal to the average recorded during the HCl stack test where the HCl stack test run result demonstrates compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(6),(i),(ii),(iii); 40 CFR 63.1349(c)]

C.78. LLL HCl Emissions Tests with SO₂ Monitoring. If the permittee chooses to monitor SO₂ emissions using a CEMS to demonstrate HCl compliance, follow the procedures in (b)(8)(i) through (ix) of 40 CFR 63.1349 and in accordance with the requirements of 40 CFR 63.1350(l)(3). The permittee must establish an SO₂ operating limit equal to the average recorded during the HCl stack test. This operating limit will apply only for demonstrating HCl compliance. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(b)(8)]

C.79. Compliance with NESHAP Subpart LLL. Performance test results shall be documented in complete test reports that contain the information required by 40 CFR 63.1349(a). [Rule 62-204.800, F.A.C.; 40 CFR 63.1349(a)]

C.80. LLL Conditions of Performance Tests. Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [Rule 62-204.800, F.A.C.; 40 CFR 63.1349(e)]

C.81. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Notification, Reporting and Record Keeping Requirements

C.82. LLL Notification Requirements. The owner or operator shall comply with the notification requirements of 40 CFR 63.1353(a),(b)(1),(2),(4),(5), and (6). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1353(a) and (b), (1), (2), (4), (5), (6)]

C.83. LLL Recordkeeping Requirements. The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 40 CFR 63 Subpart LLL recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance,

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Subsection C. Emissions Unit 004

corrective action, report, or record. At a minimum, the most recent **two** years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall also comply with 40 CFR 63.1355(b), (c), (d), (e), (f), (g), and (h). [Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a), (b), (c), (d), (e), (f), (g), (h)]

C.84. LLL Performance Test Reporting Requirements.

- a. The permittee must submit the information specified in paragraphs (1) and (2) of this Condition no later than 60 days following the initial performance test. All reports must be signed by a responsible official.
 - (1) The initial performance test data as recorded under paragraph (b) of 40 CFR 63.1349.
 - (2) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), (7), and (8) of 40 CFR 63.1349(b), as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.
- b. As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR 63.2, conducted to demonstrate compliance with any standard covered by this subpart, the permittee must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the ERT (see <https://www.epa.gov/ttn/chief/ert/index.html>)

[Rule 62-204.800. F.A.C.; 40 CFR 63.1349(d)]

C.85. LLL Reporting Requirements. The owner or operator shall comply with the reporting requirements of 40 CFR 63.1354(a),(b),(c). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a),(b), (c)]

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Subsection D. Emissions Units 005, 006, and 007

The specific conditions in this subsection apply to the following emissions units:

EU No.	Description	Emissions Points	Description	Control Device
-005	Clinker Cooler: Kiln product (clinker) discharges from kiln into the clinker cooler	K-15	Stack of Clinker Cooler Particulate Matter will be continuously monitored through use of a PM continuous parametric monitoring system (PM CPMS) in the main kiln/raw mill in accordance with the requirements of NESHAP subpart LLL.	ESP
-006	Clinker and Cement Processing Operations: Activities include cement being transferred to storage silos from the finish mill and transferred from a silo.	L-03	Clinker transport system	Baghouse
		L-06	Clinker storage system	Baghouse
		L-25	Gypsum/off-spec clinker transport The 700 ton wet limestone storage bin (L09-02) allows limestone to replace some of the natural gypsum normally used in the finish mill when grinding of clinker into cement. It is a totally enclosed conveying system pursuant to 40 CFR 63.1341 and vents through EP L25-01	Baghouse
		M-08	Clinker conveyor system-south	Baghouse
		M-09	Clinker conveyor system-north	Baghouse
		N-09	Finish mill SEPOL stack (west)	Baghouse
		N-12	Finish mill discharge stack (east)	Baghouse
		N-36	Fringe bin	Baghouse
		N-91	Clinker grinding (finish mill-south)	Baghouse
		Q-14	Truck loadout (west)	Baghouse
		Q-17	Truck loadout (east)	Baghouse
		P-03	Cement transport conveyor	Baghouse

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EU No.	Description	Emissions Points	Description	Control Device
-006	Clinker and Cement Processing Operations: Activities include cement being transferred to storage silos from the finish mill and transferred from a silo.	P-11	Cement silo inlet	Baghouse
		Q-24	Cement railcar loadout	Baghouse
-007	Clinker and Cement Processing: Unenclosed Conveyor Transfer Points – M conveyors. A network of conveyors that transfer clinker from the clinker silos to cement grinding operations. Additives are introduced to the clinker on the pan conveyor.	---	---	None

{Permitting notes: This emissions unit is regulated under NSPS- 40 CFR 60 Subpart F - Standards of Performance for Portland Cement Plants, 40 CFR 60, Subpart A – General Provisions, 40 CFR 63 Subpart LLL, National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry, 40 CFR 63 Subpart A- General Provisions, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration, Best Available Control Technology (BACT) Determination, dated June 1, 2000.

These emissions units are exempted (except as provided in 40 CFR 63.1356) from otherwise applicable NSPS requirements in 40 CFR 60, Subpart F.

Essential Potential to Emit (PTE) Parameters

- D.1. Hours of Operation -EU 005, EU 006, EU 007.** These emissions units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200 (PTE), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]
- D.2. Process Rate Limitations- EU006.** The facility shall not produce more than 150 tons of cement per hour. Process and production rates shall be further limited to 1,191,360 tons of portland cement in any consecutive 12-month period. [Rule 62-210.200 (PTE), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

Control Technology

- D.3. Particulate Matter Emissions -EU005.** Particulate matter emissions from this emissions unit shall be controlled by an electrostatic precipitator. [Permit No. 1210465-001-AC, PSD-FL-259]
- D.4. Particulate Matter Emissions-EU006.** Particulate matter emissions from this emissions unit shall be controlled by a baghouse. [Permit No. 1210465-001-AC, PSD-FL-259]

Emission Limitations and Standards

*{Permitting Note: Unless otherwise specified, the averaging time(s) for **Conditions D.5. and D.6.** are based on the specified averaging time of the applicable test method.}*

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Subsection D. Emissions Units 005, 006, and 007

D.5. Permitted Maximum Allowable Emission Rate –EU005. The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant ¹	Units ²						Method of Comp. ³	Basis
	Lb/ton-f	Lb/hr	Lb/ton-c	Lb/Mt-c	Ng/d scm TEQ	ppmvd		
PM	0.06	12.5	---	---	---	---	Calendar yr. ST (3 hr) ⁴	BACT ⁵
	---	---	0.07	---	---	---	CPMS (30d) and ST (3 hr) ^{4,8}	LLL ⁶ 40 CFR 63.1343(b) Table 1
PM ₁₀	0.051	10.7	---	---	---	---	Calendar yr. ST (3 hr) ⁴	BACT ⁵
Visible Emissions	10 percent opacity						ST ⁷	BACT ⁵
Startup Shutdown	Work practices per 40 CFR 63.1348(b)(9), No emission limits (Condition D.10.)							LLL ⁶ 40 CFR 63.1343(b) Table 1

¹ Pollutant: PM = particulate matter; PM₁₀ = PM with a mean diameter of 10 micron or less; SO₂ = sulfur dioxide; NO_x = nitrogen oxide; CO = carbon monoxide; VOC = volatile organic compounds; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride.

² Units of emission limits: lb/ton-f = pounds per ton of preheater feed; lb/hr = pounds per hour; lb/ton-c = pounds per ton of clinker; lb/Mt-c = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry.

³ Comp. = method of compliance: ST = annual stack test; CEMS – continuous emission monitor system; SBT = sorbent trap CEMS; CPMS = Continuous Parameter Monitoring System.

⁴ The averaging times for PM and PM₁₀ correspond to the required length of sampling for the initial and subsequent emission tests.

⁵ The emission limits for particulate matter and visible emissions imposed by Rule 62-212.400 and BACT are as stringent or more stringent than the limits imposed by the applicable NSPS or NESHAP rules. However, the BACT requirements do not waive or vary any monitoring or record keeping requirements of the NSPS and NESHAP rules

⁶ NESHAP, Subpart LLL New – Portland Cement Manufacturing Industry (July 27, 2015)

⁷ The averaging time for visible emissions shall be a 6-minute block average.

If possible a Method 22 will be conducted during periods of excess opacity while kiln feed is down to insure opacity readings are inaccurate due to no stack flow

⁸ The PM performance tests are performed using Method 5 or 5I and consist of three 1-hr tests.

{Permitting Note: These emission limits for EU005, along with annual production limits, effectively limit annual emissions to: PM, 33.8 and PM₁₀, 28.5 tons per year. The particulate weight emission standard and the visible emissions limit of 10% opacity are BACT}

[Rules 62-210.700(5) and 62-212.400, F.A.C., and BACT; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-011-AC/PSD-FL-259F; & 1210465-037-AC/PSD-FL-259J; and 40 CFR 63.1345(b) Table 1]

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D.6. Permitted Maximum Allowable Emission Rate – EU006, EU007. The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant ¹	Emissions Unit Number	gr/scf ²	Method of Comp. ³	Basis
PM	006	0.01		BACT ⁵
PM ₁₀	All emission points	0.0085		BACT ⁵
Visible Emissions	006 All emission points	5 percent	Annual EPA Method 9 6 minutes	BACT ⁵
	006 Emission Points N-09, N-12 ALL Operating Modes	10 percent opacity	EPA Method 22 or COMS	LLL ⁴ 40 CFR 63.1343(b) Table 1
	006 Emission Points L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24	10 percent opacity	EPA Method 22	LLL ⁴ 40 CFR 63.1345
	007 All Emission Points	10 percent opacity		BACT
		10 percent opacity	EPA Method 22	LLL ⁴ 40 CFR 63.1345

¹ Pollutant: PM = particulate matter; PM₁₀ = PM with a mean diameter of 10 micron or less; SO₂ = sulfur dioxide; NO_x = nitrogen oxide; CO = carbon monoxide; VOC = volatile organic compounds; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride.

² Units of emission limits: gr/dscf = grains per dry standard cubic feet

³ Comp. = method of compliance: ST = annual stack test; CEMS – continuous emission monitor system; SBT = sorbent trap CEMS; COMS = continuous opacity monitoring system.

⁴ NESHAP, Subpart LLL New – Portland Cement Manufacturing Industry (July 27, 2015)

⁵ The BACT emission limits of this permit for emissions unit 006 are as stringent or are more stringent than the emission limits imposed by otherwise applicable rules.

{Permitting Note: EU 006: These emission limits effectively limit annual emissions of PM for all emission points in this emission unit to 61.3 tons per year. PM10 emissions are estimated to equal 85% of PM emissions, or 52.1 tons per year. The particulate weight emission standard and the visible emissions limit of 5% opacity are BACT.}

[Rules 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT; Permit No. 121-0465-001-AC/PSD-FL-259; and 40 CFR 63.1343(b) Table 1; 40 CFR 63.13435]

Monitoring of Operations

D.7. O&M Plan for ESP – EU 005. The owner or operator shall prepare an operation and maintenance plan (O&M plan) to address operation and regular, routine inspection and maintenance of the electrostatic precipitator for the clinker cooler (EU 005). The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. [Permit No. 1210465-001-AC/PSD-FL-259]

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- D.8. O&M Plan for Baghouses - EU006.** The owner or operator shall comply with the operation and maintenance plan (O&M plan) submitted to address operation and regular, routine inspection and maintenance of the baghouses for emissions unit 006. The O&M plan addressed the schedule for inspection of this equipment and required preventive maintenance and the required records of the condition of the equipment upon each inspection and any maintenance activities performed. [Permit No. 1210465-001-AC/PSD-FL-259]
- D.9. Operations and Maintenance Plan - EU 005, EU 006, EU 007.** The owner or operator shall prepare for each affected source subject to the provisions of 40 CFR 63 Subpart LLL, a written operations and maintenance plan. The plan must include the information required in 40 CFR 63.1347. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1347(a),(1),(2),(b)]
- D.10. LLL Continuous Monitoring Requirements - EU 005, EU 006, EU 007.** Compliance must be demonstrated with the emissions standards and operating limits of 40 CFR 63 Subpart LLL by using the performance test methods and procedures in 40 CFR 63.1350 and 40 CFR 63.8 for each affected source. These emissions units shall comply with the requirements of 40 CFR 63.1348(b)(1),(3), and (9). [Rule 62-204.800, F.A.C.; and 40 CFR 63.1348(b)(1),(2), (3), (9)]
- D.11. LLL Changes in operations - EU 005, EU 006, EU 007.** If the owner or operator plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 CFR 63 Subpart LLL, the source must conduct a performance test as specified in 40 CFR 63.1349(b). These emissions units shall also comply with the requirements of 40 CFR 63.1348(c)(2). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(c)]
- D.12. LLL General duty to minimize emissions - EU 005, EU 006, EU 007.** Any affected source shall meet the requirements of 40 CFR 63.1348(d). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1348(d)]
- D.13. LLL Monitoring Requirements – EU005, EU006, EU 007.**
- Following the compliance date, the owner or operator must demonstrate compliance with 40 CFR 63 Subpart LLL on a continuous basis by meeting the requirements of 40 CFR 63.1350.
 - For each existing unit that is equipped with a CMS, maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests.
 - Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section is a violation.
- [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1),(3),(4)]
- D.14. LLL Particulate Matter Monitoring Requirements – EU005.**
- PM CPMS.** A PM CPMS shall be used to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. The PM performance test shall be conducted using Method 5 or Method 5I of Appendix A-3 of 40 CFR 60. The PM CPMS shall be used to demonstrate continuous compliance with this operating limit. The performance test must be repeated annually and the site-specific operating limit reassessed and adjusted in accordance with the results of the performance test using the procedures in 40 CFR 63.1349(b)(1)(i) through (vi). The test must also be repeated if the analytical range of the instrument is changed, or if the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration is replaced.
 - To determine continuous compliance, the PM CPMS output data must be used for all periods when the process is operating and the PM CPMS is not out-of-control. Continuous compliance must be demonstrated by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit

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(milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day.

- c. For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the owner or operator must:
 - (1) Within 48 hours of the exceedance, visually inspect the APCD;
 - (2) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and
 - (3) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. Additional testing is not required to be conducted for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.
- d. PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(b)(1)]

D.15. LLL Clinker Production Monitoring Requirements – EU005. Clinker production shall be determined in accordance with the requirements of 40 CFR 63.1350(d).

[Rule 62-204.800, F.A.C.; and 40 CFR 63.1350(d)]

D.16. EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24) and-EU 007: Opacity Monitoring Requirements/ EPA Method 22. The owner or operator shall monitor opacity in accordance with the provisions of 40 CFR 63.1350(f)(1) and the monitoring plan developed in accordance with paragraph 40 CFR 63.1350(p). An opacity monitoring plan shall also be developed in accordance with 40 CFR 63.1350(p)(1) through (4) and 40 CFR 63.1350(o)(5), if applicable. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(1)]

D.17. LLL Opacity Corrective Actions– EU006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24), and EU007. If visible emissions are observed during any Method 22 visible emissions test conducted under 40 CFR 63.1350(f)(1) [**Condition D.16.**], the owner or operator must initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(3)]

D.18. LLL Opacity Monitoring/ EPA Method 22- EU 006 (EPs N-09, N-12). The owner or operator shall monitor opacity in accordance with the provisions of 40 CFR 63.1350(f)(2). The duration of the Method 22 performance test must be 6 minutes. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(2)]

D.19. LLL Opacity Monitoring/ EPA Method 22- EU 006 (EPs N-09, N-12). If visible emissions are observed during any Method 22 visible emissions test conducted under 40 CFR 63.1350(f)(2) [**Condition D.18.**], the owner or operator must initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(3)]

D.20. LLL Opacity Monitoring/ COMS - EU 006 (EPs N-09, N-12). The requirements under 40 CFR 63.1350(f)(2) to conduct daily Method 22 testing do not apply to any specific finish mill equipped with a COMS. If the owner or operator chooses to install a COMS in lieu of conducting the daily visible emissions testing required under 40 CFR 63.1350(f)(2), then the COMS must be installed at the outlet of the PM control device of the finish mill and the COMS must be installed, maintained, calibrated, and operated as required by 40 CFR 63 Subpart A- General Provisions and according to 40 CFR 60 PS-1 of Appendix B. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(f)(4), (4)(i)]

D.21. LLL Parameter Monitoring Requirements- EU 005. If the permittee has an operating limit that requires the use of a CMS, the permittee must install, operate, and maintain each continuous parameter

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monitoring system (CPMS) according to the procedures in paragraphs (1) through (4) of 40 CFR 63.1350(m) by the compliance date specified in 40 CFR 63.1351. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(m)(1)-(4)]

- D.22. LLL Development and submittal (upon request) of monitoring plans- EU 005, EU 006, EU 007.** If compliance with any applicable emissions limit is demonstrated through performance stack testing or other emissions monitoring, a site-specific monitoring plan must be developed according to the requirements in paragraphs (1) through (4) of 40 CFR 63.1350(p). This requirement also applies if the owner or operator petitions the EPA Administrator for alternative monitoring parameters under paragraph (o) of 40 CFR 63.1350 and 40 CFR 63.8(f). If the permittee uses a BLDS, the permittee must also meet the requirements specified in paragraph (p)(5) of 40 CFR 63.1350. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(p)]

Test Methods and Procedures

D.23. Repeat PM Emissions Tests- EU 005.

- a. **LLL Requirements.** Performance tests must be repeated annually and the site-specific operating limit reassessed and adjusted in accordance with the results of the performance test. [Rule 62-204.800, F.A.C.; and 40 CFR 63.1349(b)(1)(i)]
- b. **State Rule Requirements.** An annual PM test is required using EPA Method 5 to demonstrate compliance with the PM BACT limit stated in **Condition D.5**. An annual PM₁₀ is required using EPA Method 5 (assuming all PM measured is PM₁₀). The minimum sample volume shall be 30 dry standard cubic feet. [Rule 62-297.310(8), F.A.C. and BACT; Permit No. 1210465-001-AC/PSD-FL-259]

- D.24. BACT Visible Emissions – Test Method and Test Frequency- EU 005.** Testing for demonstration of compliance shall be performed in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). Each test shall be conducted with all process units operating at their permitted capacity. [Rules 62-297.310(8), and 62-204.800(11)(b)48., F.A.C. and BACT; Permit Nos. 1210465-001-AC/PSD-FL-259 and 1210465-037-AC/PSD-FL-259J]

- D.25. BACT Visible Emissions- Test Method- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** Testing for demonstration of compliance with the PM BACT limit stated in **Condition D.5**. shall be performed in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 63.1349(b)(2)]

- D.26. BACT Visible Emissions- Test Duration- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** The required minimum period of observation for a visible emissions test shall be 30 minutes, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.; Rule 62-297.620(4), F.A.C.]

- D.27. BACT Visible Emissions- Test Frequency- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 63.1349(c)]

{Permitting Note: Pursuant to 40 CFR 63 Subpart LLL, 40 CFR 63.1349(c), a visible emissions test is not required except as required by 40 CFR 63.1348(b). [Rule 62-204.800, F.A.C., 40 CFR 63.1349(c)]}

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- D.28. BACT Particulate Matter- Test Method- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A (2009 or later version). [Permit No. 1210465-001-AC/PSD-FL-259]
- D.29. BACT Particulate Matter- Test Frequency- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** Annual compliance testing for particulate matter emissions from this emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. [Rule 62-297.620(4), F.A.C. and Permit No. 1210465-001-AC, PSD-FL-259]
- D.30. BACT Particulate Matter (PM₁₀)- Test Method- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** Testing for demonstration of compliance shall be performed using EPA Method 201 of 40 CFR 51, Appendix M 2009 or later version) for PM₁₀ emissions. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]
- D.31. BACT Particulate Matter (PM₁₀)- Test Frequency- EU 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24).** Particulate matter₁₀ emissions testing for EU006 are not required if the particulate matter test(s) demonstrate compliance with the PM limits. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]
- D.32. BACT Visible Emissions- Test Method- EU 006 (EPs N-09, N-12).** Testing for demonstration of compliance shall be performed in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259]
- D.33. BACT Visible Emissions- Test Duration- EU 006 (EPs N-09, N-12).** The required minimum period of observation for a visible emissions test shall be 30 minutes, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.; Rule 62-297.620(4), F.A.C.]
- D.34. BACT Visible Emissions- Test Frequency- EU 006 (EPs N-09, N-12).** A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 63.1348(a)(2)]
- {Permitting Note: These affected sources are not subject to opacity limitations under, 40 CFR 63.1345. As such, pursuant to 40 CFR 63.1348(a)(2), a demonstration of compliance with the opacity emissions standards by using the performance test methods and procedures in 40 63.1349(b)(2) is not applicable. [Rule 62-204.800, F.A.C., 40 CFR 63. 1348(a)(2)]}*
- D.35. BACT Particulate Matter- Test Method- EU 006 (EPs N-09, N-12).** If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A (2009 or later version). [Permit No. 1210465-001-AC/PSD-FL-259]
- D.36. BACT Particulate Matter- Test Frequency- EU 006 (EPs N-09, N-12).** Annual compliance testing for particulate matter emissions from this emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. [Rule 62-297.620(4), F.A.C. and Permit No. 1210465-001-AC, PSD-FL-259]
- D.37. BACT Particulate Matter (PM₁₀)- Test Method- EU 006 (EPs N-09, N-12).** Testing for demonstration of compliance shall be performed using EPA Method 201 of 40 CFR 51, Appendix M 2009 or later version)

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for PM₁₀ emissions. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]

D.38. BACT Particulate Matter (PM₁₀)- Test Frequency- EU 006 (EPs N-09, N-12). Particulate matter₁₀ emissions testing for EU006 are not required if the particulate matter test(s) demonstrate compliance with the PM limits. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; Permit No. 1210465-001-AC/PSD-FL-259]

D.39. BACT Visible Emissions- Test Method- EU 007. Testing for demonstration of compliance shall be performed in accordance with EPA Method 9 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259]

D.40. BACT Visible Emissions- Test Duration- EU 007. The required minimum period of observation for a visible emissions test shall be 30 minutes, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.; Rule 62-297.620(4), F.A.C., and Permit No. 1210465-001-AC, PSD-FL-259]

D.41. BACT Visible Emissions- Test Frequency- EU 007. A visible emissions test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 63.1349(c)]

{Permitting Note: Pursuant to 40 CFR 63 Subpart LLL, 40 CFR 63.1349(c), a visible emissions test is not required except as required by 40 CFR 63.1348(b). [Rule 62-204.800, F.A.C., 40 CFR 63.1349(c)]}

D.42. LLL Compliance - EUs 005, 006 (EPs L-03, L-06, L-25, M-08, M-09, N-36, N-91, Q-14, Q-17, P-03, P-11, L-06, Q-24), & EU 007. Performance test results shall be documented in complete test reports that contain the information required by 40 CFR 63.1349(a). [Rule 62-204.800, F.A.C.; 40 CFR 63.1349(a)]

D.43. LLL Conditions of Performance Tests. Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [Rule 62-204.800, F.A.C.; 40 CFR 63.1349(e)]

D.44. Common Testing Requirements. Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Notification, Reporting, and Recordkeeping Requirements

D.45. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements. [Rule 62-213.440(1)(b), F.A.C.]

D.46. LLL Notification Requirements. The owner or operator shall comply with the notification requirements of 40 CFR 63.1353(a),(b). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1353(a) and (b)]

D.47. LLL Reporting Requirements. The owner or operator shall comply with the reporting requirements of 40 CFR 63.1353(a),(b),(c). [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a) and (b), (c)]

D.48. LLL Recordkeeping Requirements. The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least

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five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent **two** years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall also comply with 40 CFR 63.1355(b), (c), (d), (e), (f), (g), and (h). [Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a), (b), (c), (d), (e), (f), (g), (h)]

D.49. NESHAP LLL Performance Test Reporting Requirements.

- a. The permittee must submit the information specified in paragraphs (1) and (2) of this Condition no later than 60 days following the initial performance test. All reports must be signed by a responsible official.
 - (1) The initial performance test data as recorded under paragraph (b) of this section.
 - (2) The values for the site-specific operating limits or parameters established pursuant to 40 CFR 63.1349(b)(1) and a description, including sample calculations, of how the operating parameters were established during the initial performance test.
- b. As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR 63.2, conducted to demonstrate compliance with any standard covered by this subpart, the permittee must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool(ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/)
[Rule 62-204.800. F.A.C.; 40 CFR 63.1349(d)]

D.50. Records of Startup, Shutdown and Malfunction. The owner or operator shall make and maintain records of periods of startup, shutdown and malfunction. These records shall show the dates, times and duration of these episodes and shall document suspected cause of each episode, corrective actions taken by the owner or operator and actions taken to reduce excess emissions. [Permit No. 1210465-001-AC/PSD-FL-259]

Other Applicable Requirements

D.51. Federal Rule Requirements- EUs 005, 006, 007. In addition to the Conditions listed above, this emissions unit is also subject to the applicable requirements contained in the attached permit appendices:

- 40 CFR 63, Subpart A – General Provisions (as stated in Table 1 to Subpart LLL of Part 63).
- 40 CFR 63 Subpart LLL- National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry
- 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants

{Permitting Note: The requirements of Subpart LLL are provided for clarity and convenience in this subsection. However, if all the applicable requirements from the subpart are not contained in this subsection, the Permittee is still subject to the omitted requirements.}

[Rule 62-213.440, F.A.C.; 40 CFR 63.1340(a),(b)(2), (4), (6), (7), (8); 40 CFR 63.1342]

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Subsection E. Emissions Units 008, and 009

The specific conditions in this subsection apply to the following emissions units:

EU	Emissions unit Description	Emissions Points	Description	Control Device
008	Coal Mill and Coal Transfer System <ul style="list-style-type: none">Coal is transported to the coal storage area and to silos before going to the coal mill. Pulverized coal is then transferred to a pulverized coal storage bin for use later.	S-17 East	Each baghouse vents to the single Coal Mill stack	Each emissions point is equipped with a Baghouse
		S-17 West		
		S-21	Dust Collector for coal transfer system	
009	Unenclosed Coal Conveying Equipment – S Conveyors <ul style="list-style-type: none">A network of conveyors to transport coal from the receiving area to a coal storage silo and from the coal storage silo to the coal mill.	-----	---	Fugitive

{Permitting Notes: Emissions units 008 and 009 are subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants (40 CFR 60.250 – 60.254) and 40 CFR 60 Subpart A – General Provisions, Rule 62-212.400, F.A.C., Prevention of Significant Deterioration, effective February 5, 1998, Best Available Control Technology (BACT) Determination, dated June 1, 2000.}

Essential Potential To Emit (PTE) Parameters

E.1. Hours of Operation- EUs 008, 009. These emissions units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200 (PTE), F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]

E.2. Process Rate Limitation- EU 008. The coal mill shall not crush more than 13,360 tons of coal and petroleum coke in any month.

{Permitting Note: This monthly limit corresponds to an annual limit of 160,300 tons per year}

[Rule 62-210.200 (PTE), F.A.C.; Permit Nos. 1210465-001-AC/PSD-FL-259; 1210465-011-AC/PSD-FL-259F]

E.3. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Control Technology

E.4. Particulate Matter Emissions for EU008 – Control Device. Particulate matter emissions from each emission point of this emissions unit shall be controlled by a baghouse. [Permit No. 1210465-001-AC, PSD-FL-259]

E.5. O&M Plan for Baghouses- EU 008. The owner or operator shall prepare an operation and maintenance plan (O&M plan) to address operation and regular, routine inspection and maintenance of the baghouses for Emissions Unit 008. The O&M plan shall address the schedule for inspection of this equipment and required preventive maintenance and shall require records of the condition of the equipment upon each inspection and any maintenance activities performed. [Permit No. 1210465-001-AC/PSD-FL-259]

Emissions Limitations and Standards

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection E. Emissions Units 008, and 009

{Permitting Note: Unless otherwise specified, the averaging time(s) for Specific Conditions E.6.- E.7. are based on the specified averaging time of the applicable test method.}

E.6. Maximum Allowable Emission Rates (Emissions Unit 008). The permitted maximum allowable emission rate for each pollutant and each emission points is as follows:

Emission Point	Description	Pollutant	Emission Limit	Regulation
S-17 East	The single Coal mill stack	PM/ PM ₁₀	0.01 grains/dscf	BACT
S-17 West			0.070 g/dscm (0.031 gr/dscf)	40 CFR 60.252(a)(1)
S-21	Dust collector for coal transfer system.	PM/ PM ₁₀	0.01 grains/dscf	BACT
S-17 East	The single Coal mill stack	Visible Emissions	5% Opacity	BACT
S-17 West			<20% Opacity	40 CFR 60.252(a)(2)
S-21	Dust collector for coal transfer system.	Visible Emissions	<20% Opacity	40 CFR 60.254(a)

{Permitting Note: These emissions limits for EU008 effectively limit annual emissions of PM for all emission points in this emission unit to 8.2 tons per year. PM₁₀ emissions are estimated to equal PM emissions, or 8.2 tons per year.}

{Permitting Note: The coal mill, emission points S-17 East and S-17 West of Emissions Unit 008, is subject to the requirements for thermal dryers. Emissions Unit 009 is subject to the requirements for coal processing and conveying equipment. Both emission points of emissions unit 008 are also subject to the emission limits for coal processing and conveying equipment, but the BACT limits are as stringent or more stringent than the limits imposed by this rule.}

[Rules 62-210.700(5), 62-212.400 and 62-297.620(4), F.A.C., BACT; Permit Nos. 1210465-001-AC/PSD-FL-259 and 1210465-004-AC/PSD-FL-259C]

E.7. NSPS Y Emission Limit – Emissions Unit 009. The Visible Emissions Limit for Emission Unit 009 is < 20% Opacity. [40 CFR 60.252(c)]

Continuous Monitoring Requirements

E.8. NSPS Y Temperature Monitoring Devices – EU008. A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer shall calibrated, maintained, and operated on a continuous basis.

The temperature monitoring device shall be certified by the manufacturer to be accurate within $\pm 3^{\circ}$ Fahrenheit.

The temperature monitoring device shall be recalibrated annually in accordance with procedures under 40 CFR 60.13(b).

[40 CFR 60.256(a)(1)(i) and (2)]

SECTION III. EMISSIONS UNITS AND SPECIFIC CONDITIONS.

Subsection E. Emissions Units 008, and 009

Test Methods and Procedures

- E.9. Visible Emissions- Test Method – EU 008.** Testing for demonstration of compliance shall be performed in accordance with EPA Method 9 and the procedures in 40 CFR 60.11 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 60.255(a); 40 CFR 60.257(a)]
- E.10. BACT Visible Emissions- Test Frequency- EU 008.** formal compliance test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]
- E.11. Particulate Matter- Test Method- EU 008.** If the Department has reason to believe that the particulate weight emission standard is not being met, it shall require that compliance be demonstrated using EPA Method 5, as described in 40 CFR 60 Appendix A (2009 or later version). [Permit Nos. 1210465-001-AC/PSD-FL-259; and 1210465-004-AC/PSD-FL-259C; 40 CFR 60.255(a); 40 CFR 60.257(b)(1)-(5)]
- E.12. BACT Particulate Matter- Test Frequency- EU 008.** Annual compliance testing for particulate matter emissions from this emissions unit is waived, and an alternative standard of 5% opacity is imposed, pursuant to Rule 62-297.620(4), F.A.C. [Rule 62-297.620(4), F.A.C. and Permit Nos. 1210465-001-AC, PSD-FL-259; and-1210465-004-AC/PSD-FL-259C]
- E.13. BACT Particulate Matter₁₀- Test Frequency- EU 008.** Particulate matter₁₀ emissions testing for EU008 is not required because all PM emissions shall be assumed to be PM₁₀. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT; No. 1210465-001-AC/PSD-FL-259]
- E.14. Visible Emissions- Test Method – EU 009.** Testing for demonstration of compliance shall be performed in accordance with EPA Method 9 and the procedures in 40 CFR 60.11 (as described in 40 CFR 60, Appendix A-4) for the visual determination of opacity. [Rules 62-297.310 and 62-297.620(4), F.A.C., and BACT, Permit No. 1210465-001-AC/PSD-FL-259; 40 CFR 60.255(a); 40 CFR 60.257(a)]
- E.15. BACT Visible Emissions- Test Frequency- EU 009.** A formal compliance test shall be conducted during each calendar year (January 1st - December 31st). [Rule 62-297.310(8)(a)3., F.A.C., Rule 62-297.310(8)(b)1., F.A.C.; Permit No. 1210465-001-AC/PSD-FL-259]
- E.16. Visible Emissions Test Duration –EUs 008, 009.** The required minimum period of observation for a visible emissions test shall be 30 minutes for all other emissions units, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. [Rule 62-297.310(5)(b), F.A.C.]
- E.17. Common Testing Requirements.** Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix TR, Facility-Wide Testing Requirements, of this permit. [Rule 62-297.310, F.A.C.]

Reporting and Recordkeeping Requirements

- E.18. Records of Process Rates.** The owner or operator shall make and maintain records showing the monthly processing rate of coal and petroleum coke crushed in the coal mill. Records of the processing rate for each month shall be completed no later than 10 days following the end of the month. [Permit No. 1210465-001-AC/PSD-FL-259]

Other Applicable Requirements

- E.19. Federal Rule Requirements- EU 008, 009.** In addition to the Conditions listed above, this emissions unit is also subject to the applicable requirements contained in the attached permit appendices:

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Subsection E. Emissions Units 008, and 009

- 40 CFR 60, Subpart A – General Provisions
- 40 CFR 60, Subpart Y

{Permitting Note: The requirements of Subpart Y are provided for clarity and convenience in this subsection. However, if all the applicable requirements from the subpart are not contained in this subsection, the Permittee is still subject to the omitted requirements.}

[Rule 62-213.440, F.A.C., 40 CFR 60.250(a)(b)]

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Subsection F. EU 011 Alternative Fuel Requirements

The specific conditions in this section apply to the following emissions units:

EU No.	Description	Emissions Points	Description	Emissions Control
-011	Grinding and Screening Operations for Alternative Fuels (Re-Processing): Mechanical and Pneumatic Feed Systems for Alternative Fuels, unenclosed conveyors and transfer points from processing to alternative fuel injection point.	---	Fugitive	Material Moisture or Water Sprays (as needed)

Use of Alternative Fuels

F.1. Alternative Fuels - Equipment. The Permittee is authorized to operate the following permanent equipment for firing alternative fuels in the pyroprocessing kiln system.

- a. Mechanical and Pneumatic Handling and Feed Systems. Each feed system shall be designed to handle alternative fuels with multiple points of injection to accommodate various Alternative Fuels particle size, density and heating value. The nominal feed rate of each feed system is 15 tons of Alternative Fuels per hour.
 - (1) The mechanical feed system(s) shall consist of mechanical feeder(s), weighing mechanism(s), load hopper(s) with required conveyors, storage bins, and other associated equipment.
 - (2) The pneumatic feed systems shall consist of a system of mechanical feeder(s) and associated system of air movement equipment and related ductwork, weighing mechanism(s), loading hopper(s) with required conveyors, storage bins, and other associated equipment.
- b. Kiln Burner, AF Handling and Firing Systems. The kiln burner system shall consist of multi-channel fuel burner(s) and/or other related feed equipment specifically designed for co-firing Alternative Fuels with authorized fuels in the kiln.
- c. Feed Systems. To the extent practicable, components of the feed systems shall be substantially enclosed or covered to prevent the loss of any Alternative Fuels and fugitive dust emissions. Each feed system shall be integrated into the existing kiln data system. The Alternative Fuels feed rate shall be recorded along with the other fuel feed rates.
- d. Fuel Preparation Equipment. The fuel preparation equipment shall consist of grinding, shredding, screening, and sizing equipment to prepare the Alternative Fuels. This equipment shall be powered by electric motors.

[Permit No. 1210465-023-AC and Rule 62-296.320, F.A.C.]

F.2. Alternative Fuels -Prohibited Materials. The Permittee is prohibited from firing the following materials in the pyroprocessing system: hazardous waste as defined in 40 CFR 261, nuclear waste, and radioactive waste. The Permittee shall not knowingly fire biomedical waste, asbestos-containing materials per 40 CFR 61 Subpart M, whole batteries, and unsorted municipal waste. These prohibited materials shall not be used to manufacture engineered fuels.

If the Permittee identifies delivered prohibited materials, the supplier shall be contacted and the material shall be returned, disposed, or any other appropriate legal method of handling the material shall be employed. The Permittee shall maintain records of delivery, sampling and analysis, and actions taken to correct

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Subsection F. EU 011 Alternative Fuel Requirements

abnormalities. Such records shall be stored onsite for at least five years and available for inspection upon request.

[Permit No. 1210465-023-AC]

F.3. Alternative Fuels. Subject to the Alternative Fuels Acceptance Criteria, the Permittee is authorized to co-fire authorized fuels with any of the following Alternative Fuels.

- a. Engineered Fuel (EF) is engineered to have targeted, consistent fuel properties such as: calorific value, moisture, particle size, ash content, and volatility. The specific targeted properties are established based on available alternative fuel material supply and are carefully controlled through blending of nonhazardous combustible materials or through separation of non-hazardous incombustible materials from combustible materials (mixes of any alternative fuels where the blending and processing may also include the addition of on-specification and off-specification used oils or other non-hazardous liquids to ensure consistent and predictable fuel properties).
- b. Tire-Derived Fuel (TDF), which includes whole and shredded tires with or without steel belt material including portions of tires such as tirefluff.
- c. Roofing Materials, which consists of roofing shingles and related roofing materials with the bulk of the incombustible grit material separated and which is not subject to regulations as an asbestos-containing material per 40 CFR 61 subpart M.
- d. Plastics, which includes materials such as polyethylene plastic used in agricultural and silvicultural operations. This may include incidental amounts of chlorinated plastics.
- e. Agricultural Biogenic Materials, which includes materials such as peanut hulls, rice hulls, corn husks, citrus peels, cotton gin byproducts, animal bedding and other similar types of materials.
- f. Cellulosic Biomass - Untreated, which includes materials such as untreated lumber, tree stumps, tree limbs, slash, bark, sawdust, sander dust, wood chips scraps, wood scraps, wood slabs, wood millings, wood shavings and processed pellets made from wood or other forest residues.
- g. Cellulosic Biomass - Treated, which includes preservative-treated wood that may contain treatments such as creosote, copper-chromium-arsenic (CCA), or alkaline copper quaternary (ACQ), painted wood, or resinated woods (plywood, particle board, medium density fiberboard, oriented strand board, laminated beams, finger-jointed trim and other sheet goods). The Permittee shall not fire more than 1,000 lb/hour averaged on a 7-day block average basis of segregated streams of wood treated with copper chromium arsenic (CCA) compounds.
- h. Carpet-Derived Fuel, which includes shredded new, reject or used carpet materials
- i. Biosolids, which includes organic materials sanitized to meet EPA Class A and/or B sanitization standards¹ and is derived from treatment processes of public treatment water systems.
- j. Alternative Fuel Mix, which includes a blended combination of two or more of any of the above materials.

[Permit No. 1210465-023-AC and Rule 62-210.200(PTE), F.A.C.]

F.4. Receiving Alternative Fuels: For Alternative Fuels received at the plant, the Permittee shall comply with the following requirements.

- a. All AF materials received at the plant shall be in covered trucks and/or enclosed containers. When unloading and handing AF, the Permittee shall take reasonable precautions to prevent fugitive dust emissions.
- b. The Permittee shall record the amount the category/type and amount of each AF received.
- c. Each AF material received shall be sampled and analyzed in a manner consistently with industry standards for quality assurance and quality control to ensure that representative data is collected. At a minimum, the frequency of sampling and analysis shall be consistent with the frequency of sampling and analysis of coal. All records and results of the analysis will be maintained at the facility as required for currently permitted fuels.

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- d. Fuel Analyses Parameters. The following information shall be included when reporting the analytical results for an AF: higher heating value (Btu/lb) of AF; moisture, ash, volatiles, fixed carbon, sulfur and chlorine content (percent by weight); arsenic, cadmium, chromium, lead, selenium, and mercury contents (ppm). All concentrations are on a dry basis. Reject roofing shingles shall include a certification from the manufacturer to be made without asbestos.

[Permit No. 1210465-023-AC]

F.5.Processed/Prepared Alternative Fuels. The Alternative Fuels shall be stored:

- a. Under cover or in covered trailers, containers or buildings;
- b. On top of a paved or compacted clay surface; and
- c. By Best Management Practices to promote containment and prevent contamination of air, water and soil.

[Permit No. 1210465-023-AC; Rule 62-296.320, F.A.C.]

Equipment Shakedown and AF Assessments

F.6.Shakedown of Equipment and AF Assessments. The Permittee shall comply with the emissions standards and terms of all valid air permits during shakedown of the equipment allowed under **Condition F.1.** and AF assessments.

- a. Equipment Shakedown. After completing the construction of each system listed in **Condition F.1.**, the Permittee is authorized 90 operational days irrespective of fuel fired to ensure proper installation as well as develop good operating practices for the AF resulting in steady operation of the kiln system.
- b. AF Assessments. For each category of AF, the Permittee is authorized 60 operational days to introduce new AF into either the main kiln burner system or the precalciner/calculator to develop good operating practices for normal kiln system operation.

The Division of Air Resource Management may approve a written request by the Permittee for an additional shakedown and assessment periods due to specific extenuating circumstances.

[Permit No. 1210465-023-AC]

Performance Requirements

F.7.Operation. Alternative fuels shall only be fired once the kiln has achieved normal operation, temperatures and production (i.e., when raw materials are introduced).

- a. AF materials shall only be fed into the pyroprocessing system while the dry preheater feed is being introduced.
- b. AF shall be introduced only in the high-temperature combustion zones of the main kiln burner, the precalciner burner or appropriate secondary firing points in the precalciner/preheater.
- c. The Permittee shall make every effort during the shakedown and assessment periods to promote efficient combustion and minimize emissions impacts.
- d. Operators shall discontinue firing AF if one of the CEMS or other continuous monitors indicates a non-compliance issue related to alternative fuels.

[Permit No. 1210465-023-AC; Rule 62-204.800, F.A.C. and 40 CFR 60 Appendix A; and 40 CFR 63.1349, 1350 and 1354, Permit No. 1210465-037-AC/PSD-FL-259J]

F.8.NESHAP 40 CFR 61 Requirements – Subpart A. When combustng biosolids the Permittee shall comply with all applicable requirements of 40 CFR 61, Subpart A, General Provisions, which have been adopted by reference in Rule 62-204.800(10)(d), F.A.C., except for 40 CFR 61.08 and except that the Secretary is not the Administrator for the purposes of 40 CFR 61.04, 40 CFR 61.11, and 40 CFR 61.18. In lieu of the process set

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forth in 40 CFR 61.08, the Department will follow the permit processing procedures of Rule 62-4.055, F.A.C. When combusting biosolids the Permittee shall comply with all applicable provisions of Appendix C. 40 CFR 61 Subpart A – General Provisions included with this permit.

[Permit No. 1210465-023-AC; Rule 62-204.800(10)(d), F.A.C.]

F.9. Mercury Emissions from Biosolids. The permitted maximum allowable emission rate for mercury is 7.1 pounds per 24-hour period. [Rule 62-204.800(10)(d), F.A.C. and 40 CFR 61.52]

*{Permitting Note: The Permittee will remain subject to the limitation of 97 lb/yr of Hg, based on material analysis or NESHAP LLL Hg CEMS monitoring, as applicable. If the plant runs at least 50 percent of the time, the 24-hour emissions would average 0.5 lb/24-hour. This value (0.5 lb/24-hour period) is less than 5 percent of the allowed Hg emissions of 40 CFR 61.52. As such the Permittee is not expected to come near this limit. The compliance requirements for the mercury emissions from biosolids as specified in **Condition F.19** will be satisfied by **Condition F.18**.}*

[Permit No. 1210465-023-AC]

Monitoring Requirements

F.10. CEMS. The Permittee shall continuously monitor the following with data collected by CEMS to demonstrate compliance with the emissions standards in **Condition C.29** or **Condition C.51** (as applicable).

- a. CO (process monitor for reasonable reassurance)
- b. NO_x,
- c. SO₂
- d. THC (for VOC)
- e. CO₂

Mercury emissions shall be determined by sampling/analysis and material balance as specified in the below permit conditions or NESHAP LLL or NSPS DDDD Hg CEMS monitoring, as applicable. The default value for the mercury content of tires and TDF shall be 0.0081 µg/g; no additional sampling/analysis is required.

[Permit Nos. 120465-023-AC; 1210465-026-AC; 1210465-037-AC/PSD-FL-259J]

F.11. Operations and Emissions. The Permittee shall continuously monitor the: fuel feed rates, kiln feed rate, clinker production rate and baghouse inlet temperature in accordance with this permit.

[Permit Nos. 120465-023-AC and 1210465-026-AC]

F.12. Compliance Stack Tests. The Permittee shall continue to conduct stack tests in accordance with the methods and requirements in **Subsection C** of this permit to demonstrate compliance with the emissions standards. The required stack tests for CO, PM, and dioxins/furans shall be conducted while firing an AF that has completed the AF assessment period. At least one of the first two required stack tests for CO and dioxins/furans conducted after first use of bottom ash shall be conducted while using bottom ash unless the applicant ceases usage of bottom ash.

{Permitting Note: These emissions are not expected to be affected by alternative fuels.}

{Permitting Note: This condition is not intended to require additional testing beyond that already required by the other presently applicable permits or the requirements of the Cement NESHAP. It also provides for the possibility that at the time of the first required dioxin/furan test conducted after first use of bottom ash that bottom ash compatible with the project objectives has not yet been determined or is not available in sufficient quantity to conduct a test.}

[Permit Nos. 120465-023-AC and 1210465-026-AC]

Sampling and Analysis

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F.13. Sampling Criteria. Each AF material received shall be sampled and analyzed in a manner consistent with industry standards for quality assurance and quality control to ensure that representative data is collected. At a minimum, the frequency of sampling and analysis shall be consistent with the frequency of sampling and analysis of coal. All records and results of the analysis shall be maintained at the facility as required for currently permitted fuels. [Permit No. 1230465-023-AC]

F.14. AF Assessment and Analytical Methods. The Permittee shall use the following analytical methods to determine the composition of the AF.

Parameter	Analytical Methods
Moisture, Volatiles, Ash and Fixed Carbon	Proximate Analysis appropriate for given fuel
Carbon, Hydrogen, Nitrogen Sulfur and Oxygen	Ultimate Analysis appropriate for given fuel
Heating Value	ASTM E711 - 87(2004) Standard Test Method for Gross Calorific Value of Refuse-Derived Fuel by the Bomb Calorimeter, or ASTM D5468 - 02(2007) Standard Test Method for Gross Calorific and Ash Value of Waste Materials, or Proximate Analysis appropriate for given fuel
Chlorine	EPA SW-846 or EPA Method 9056
Mercury	EPA 7470A/7471A
Other Metals	EPA SW-846 or EPA Method 6010B

Other equivalent methods may be used with prior written approval of the Division of Air Resource Management.

[Permit No. 1230465-023-AC]

F.15. Sampling/Analysis by Permittee. : For each AF assessment, the Permittee shall obtain analytical results of the AF as required in **Condition F.4.**, the operator shall take a representative as-fired sample of the AF and have it analyzed for the parameters listed in **Condition F.4.d.** [Permit No. 1230465-023-AC]

F.16. Material Balance Records of Mercury. The Permittee shall demonstrate compliance with the mercury throughput limitation of 97 pounds per consecutive 12-month period by material balance and making and maintaining records of monthly and rolling 12-month mercury throughput. The Permittee shall, for each month of sampling required by this condition, perform daily sampling of the AF and shall composite the daily samples each month, and shall analyze the monthly composite sample to determine mercury content of these materials for the month. The Permittee shall determine the net mass of mercury introduced into the pyroprocessing system (in units of pounds per month) from the total of the product of the mercury content from the monthly composite analysis and the mass of each material or fuel used during the month. The consecutive 12-month record shall be determined from the individual monthly records for the current month and the preceding eleven months and shall be expressed in units of pounds of mercury per consecutive 12-month period. Such records shall be completed no later than 25 days following the month of the records. To determine the mercury content of the feed material and fuels to be used in the monthly calculation, sampling and analysis shall be performed for each year, sample for one month of each year and analyze that month's composite sample.

[Permit Nos. PSD-FL-259D; 1210465-023-AC; and 1210465-026-AC]

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F.17. Testing of Biosolids for Mercury. The Permittee shall test biosolids unless a waiver of emission testing is obtained under 40 CFR 61.13 from the Department. Such tests shall be conducted in accordance with the procedures set forth in 40 CFR 61 Subpart E as follows.

- a. The emission or sampling test shall be performed within 90 days of startup of firing biosolids per Method 101A or 105 in Appendix B to 40 CFR 61 Subpart E. A total of three composite samples or as necessary shall be obtained within an operating period of 24 hours. When the 24-hour operating period is not continuous, the total sampling period shall not exceed 72 hours after the first grab sample is obtained. Samples shall not be exposed to any condition that may result in mercury contamination or loss.
- b. The Department shall be notified at least 30 days prior to an emission or sampling test.
- c. The Permittee shall take samples over such a period or periods as are necessary to determine accurately the maximum emissions which will occur in a 24-hour period. No changes shall be made in the operation which would potentially increase emissions above the level determined by the most recent stack test, until the new emission level has been estimated by calculation and the results reported to the Department.
- d. All samples shall be analyzed and mercury emissions shall be determined within 30 days after the stack or sampling test. Each determination shall be reported to the Department by a registered letter within 15 calendar days following the date such determination is completed. Records of emission test results and other data needed to determine total emissions shall be retained at the source and shall be made available, for inspection by the Department, for a minimum of 2 years.
- e. The maximum 24-hour period biosolids firing rate shall be determined by use of a flow rate measurement device that can measure the mass rate of biosolids charged to the incinerator or dryer with an accuracy of ± 5 percent over its operating range. Other methods of measuring biosolids mass charging rates may be used if they have received prior approval by the Department.
- f. If sampling is used, mercury emissions shall be determined by use of the following equation.

$$E_{Hg} = \frac{MQ F_{sm(wg)}}{1000}$$

Where:

E_{Hg} = Mercury emissions, g/day.

M = Mercury concentration of biosolids on a dry solids basis, $\mu\text{g/g}$.

Q = Biosolids changing rate, kg/day.

F_{sm} = Weight fraction of solids in the collected biosolids after mixing.

1000 = Conversion factor, $\text{kg } \mu\text{g/g}^2$.

- g. No changes in the operation of a plant shall be made after a biosolids test has been conducted which would potentially increase emissions above the level determined by the most recent biosolids test, until the new emission level has been estimated by calculation and the results reported to the Department.
- h. If mercury emissions exceed 3.5 pound per 24-hour period, demonstrated either by stack sampling according to 40 CFR 61.53 or biosolids sampling, the Permittee shall monitor mercury emissions at intervals of at least once per year. The results of monitoring shall be reported and retained as indicated in **Condition F.19.d.**

*{Permitting Note: The sampling requirements of **Condition F.19.** may be satisfied with the sampling requirements of **Condition F.18.**}*

[Rule 62-204.800(10)(d), F.A.C. and 40 CFR 61.53, 53, 54, and 55; Permit No. 1210465-023-AC]

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F.18. AF Target Levels. Targets levels are the desired AF properties for as-fired fuel in the system. Target Levels are not enforceable and do not apply to individual raw materials or fuels.

Parameter	Target Levels *
Higher Heating Value	> 5,000 Btu/lb
Arsenic	< 2,000 ppm by weight
Beryllium	< 20 ppm by weight
Cadmium	< 200 ppm by weight
Chromium	< 200 ppmw (mg/kg)
Lead	< 1,000 ppmw (mg/kg)
Mercury	< 0.3 ppm by weight

* Heating value is on dry basis. All concentrations are dry basis. Target levels are based on USGS data of coal samples, (<http://pubs.usgs.gov/of/2010/11961>)

{Permitting Note: Title V permitting requires all fuel materials be analyzed for mercury content to determine compliance with an input limit of 97 pounds of mercury per 12-month period or NESHAP LLL or NSPS DDDD Hg CEMS monitoring, as applicable. }

[Permit No. 1210465-023-AC]

Notifications, Records, and Reports

F.19. Shakedown Notifications. Within fifteen days of completing construction, the Permittee shall notify the Compliance Authority and provide a schedule for shakedown and the initial AF assessment. The Compliance Authority may waive this deadline. [Permit No. 1210465-023-AC]

F.20. AF Assessment Notifications. At least five days prior to firing each new type of Alternative Fuel material listed in **Condition F.3.**, the Permittee shall notify the Compliance Authority with a proposed schedule. The Compliance Authority may waive this deadline. [Permit No. 1210465-023-AC]

F.21. Records of Fuels and Heat Input. The Permittee shall record the fuel-firing rate continuously. The Permittee shall maintain records of the quantity and representative analysis of fuels purchased, and such records shall include the parameters listed in **Condition F.4.d.** The Permittee shall make and maintain records of heat input to the pyroprocessing system on a block-hour basis, starting at the beginning of each hour, by multiplying the hourly average fuel-firing rate by the heating value representative of that fuel from the records of fuel analysis. Such records shall be completed for each block-hour, within 15 minutes of the end of each block-hour. [Permit No. 1210465-023-AC]

F.22. Reports for Shakedown and AF Assessments. During periods of authorized shakedowns and AF assessments, the Permittee shall document the shakedown and/or AF assessment period. These periods may end early when the operator is confident that good operating practices have been defined for the AF that result in steady kiln system operation. Within 45 days of completing a shakedown and/or assessment of each Alternative Fuel material listed in **Condition F.3.**, the Permittee shall provide a written report summarizing the following information collected from the shakedown and/or AF assessment period.

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- a. For a 24-hour period representing good operating practices and steady kiln operation, report: the representative analysis of the AF fired; hourly AF and fossil fuel firing rates; hourly clinker production; hourly CO, NO_x, SO₂ and THC emissions data from the CEMS; and the inlet temperature to main kiln baghouse (3-hour average). Identify the good operating practices resulting in steady kiln operation.
- b. The AF assessments may occur over several years. Emissions from the initial AF assessment of a new fuel may be excluded from the report requiring a comparison of actual-to-baseline emissions (Rules 62-212.300(1)(e) and 62-210.370, F.A.C.) since operators are still establishing good operating practices and the AF will not have been available for the full calendar year. To exclude emissions data collected during an authorized shakedown and/or AF assessment period from this report, the Permittee shall submit the following information for: total clinker production; fossil fuel fired; Alternative Fuel fired; total CO, NO_x, SO₂ and THC emissions (tons). Excluded data shall be replaced with data estimated from: the actual clinker production rate; and an emissions factor based on the average emission rates from the rest of the year (i.e., all periods except the shakedown and/or AF assessment periods).

[Rules 62-210.370 and 62-212.300, F.A.C.; Permit Nos. 1210465-023-AC and 1210465-037-AC/PSD-FL-259J]

F.23. Test Reports. The Permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix TR – Facility-Wide Testing Requirements of this permit. The Permittee shall use the most accurate of the approaches below to compute the emissions of a pollutant.

- a. If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the Permittee shall use the CEMS to compute the emissions of the pollutant.
- b. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., but emissions of the pollutant can be calculated using the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the Permittee shall use that methodology, unless the Permittee demonstrates to the Department that an alternative approach is more accurate.
- c. If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the Permittee shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the Permittee demonstrates to the Department that an alternative approach is more accurate.

[Permit No. 1210465-023-AC; Rules 62-210.370 and 62-297.310(10), F.A.C.]

5-Year Emissions Monitoring

F.24. Actual Emissions Reporting. Permit Nos. 1210465-023-AC and 1210465-026-AC were based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of Rule 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the Permittee is subject to the following monitoring, reporting and recordkeeping provisions.

- a. The Permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C., which are provided in Appendix TV, Condition TV31.
- b. The Permittee shall report to the Department within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

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- 1) The name, address and telephone number of the owner or operator of the major stationary source;
 - 2) The annual emissions calculations pursuant to the provisions of 62-210.370, F.A.C., which are provided in Appendix TV- Title V General Conditions of this permit;
 - 3) If the emissions differ from the preconstruction projection, an explanation as to why there is a difference; and
 - 4) Any other information that the owner or operator wishes to include in the report.
- c. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Department, which shall make it available for review to the general public.
- d. For Permit No. 1210465-023-AC, it is required that the annual reporting of actual emissions for the following pollutants: carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM), sulfur dioxide (SO₂), volatile organic compounds (VOC), and mercury (Hg).

The affected emissions units are: pyroprocessing/raw mill system (EU-004), the mechanical feed system, the pneumatic feed system, associated grinding and screening operations (EU-011), fugitives and combustion byproducts from related engines) and fugitive dust (EU-015) associated with additional truck traffic as well as the unloading, loading and handling of the alternative fuels.

Once construction is finished on a fuel feed system or the main kiln burner, the first report is due within 60 days of completing the first full year of operation with the equipment in place. Note that if installation of the equipment is staggered to multiple years then, correspondingly, more than five reports may be required.

As specified in **Condition F.24.**, the CO₂, NO_x, SO₂, and THC emissions data collected during the authorized shakedown/AF assessment periods may be excluded from the comparison of actual to baseline emissions. Excluded data shall be replaced with data estimated from: the actual clinker production rate; and an emissions factor based on the average emission rates from the rest of the year (i.e., all periods except the shakedown and/or assessment periods). The Permittee shall report all of the original information as actual emissions, but may deduct emissions data collected during the equipment shakedown and assessment periods while developing good operating practices.

- e. For Permit No. 1210465-026-AC, it is required that the annual reporting of actual emissions for the following pollutants: carbon monoxide (CO), and volatile organic compounds (VOC).

The affected emissions units are: In-Line Kiln/Raw Mill System (EU-004).

The 5 year period (2013 through 2017) following resumption of regular operations after the change.

{Permitting Note: Refer to the Technical Evaluation issued February 1, 2013 that contains baseline actual emissions, past production rates, projected annual emissions, and projected future production when performing the calculations described in paragraph b.3). above.}

[Permit Nos. 120465-023-AC and 1210465-026-AC, and Rules 62-212.300(1)(e) and 62-210.370, F.A.C.]

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